Merrychef

Microcook HD
Microcook TA

SERVICE MANUAL

Part No. 32Z3385 Issue No. 5

For all Microcook HD & TA models manufactured from January 2001

SERVICE MANUAL

CAUTION MICROWAVE EMISSIONS

DO NOT BECOME EXPOSED TO EMISSIONS FROM THE MICROWAVE GENERATOR OR PARTS CONDUCTING MICROWAVE ENERGY

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SAFETY CODE

This manual is designed to assist engineers who have successfully completed a Merrychef Service training course. It has been prepared to offer technical guidance for the Merrychef Microcook HD and Microcook TA Commercial Microwave Ovens.

Please remember that it is wiser **not** to attempt a service task if you are unsure of being able to complete it competently, quickly, and above all **safely**.

To avoid injury to yourself, and to protect the appliance from possible damage, please follow this Safety Code when servicing these ovens.

Before attempting to repair the oven, check it for microwave leakage.

Check that the oven is not emitting microwaves,
even when supposedly not in operation.

Check that the oven is not operating continuously,
whether the display indicates cooking or not.

Always discharge the HT capacitors before working on the oven
using a suitably insulated 10 MΩ Resistor

The following must be carried out prior to removing the rear cover from the oven :

- Switch off the mains supply and remove the plug from the wall socket.
  or
- If the oven is hard wired, ensure that the power is turned off at the mains isolator switch.

Upon completion of a service on an Microcook oven, or before reconnecting the appliance to the mains supply for testing, check all of the following points:

- All internal electrical connections are correct.
- All wiring insulation is correct and is not touching a sharp edge.
- All Earth connections are electrically and mechanically secure.
- All three door safety interlocks are secure and mechanically sound.
- The door operation is smooth.
- The door activates all three of the door interlock switches **in the correct order**.
- All fuse-holder safety covers are correctly fitted.

Before finishing the service call, recheck the following points:

- The oven is electrically safe
- All of the electronics are functioning correctly, and all of the touch pads are working.
- The power output of the oven is correct (see pages (8 & 9).
- Microwave emission is below permissible limit - 5 mW/cm²
  (see BS EN 60335-2-90).
- Oven has correct 50mm air gap all round. Air flow should not be restricted.

Product specifications:

Microcook HD Series

Microcook HD1025, HD1425, HD1725, HD1925 & HD2025

Model Number: Model prefix + Type + Voltage + Frequency + UK/Export + Customer

For example: 1925C450UK
Model 1925, Microcook, 230-240V, 50Hz, UK model

Model prefix	Type	Voltage	Frequency	UK/Export	Customer
1025 **1425** **1725** **1925** **2025**	**C**= Cook **V**=Vend	**2**= 220-230V a.c. **4**= 230-240V a.c	**50** = 50 Hz **60** = 60 Hz	**UK** = UK model **EX** = Export model	**KFC** **FP** = Feastpoint **BL** = Bourne Leisure

Power Requirements	Model HD1025 Model HD1425 Model HD1725 Model HD1925 Model HD2025	1.75kW 2.60kW 2.88kW 3.12kW
Power Output	Microwave 100%	1025W (IEC 705) 1425W (IEC 705) 1725W (IEC 705) 1925W (IEC 705)
External Dimensions	Height Width Depth	475mm (Plus 50mm minimum clearance above) 496mm (Plus 50mm minimum clearance each side) 499mm (Plus 50mm clearance behind)
Internal Dimensions	Height Width Depth Capacity	200mm 390mm 365mm 28.5 Litres (1.01ft^3)
Weight	Nett Gross packed	42.5kg 45kg
Construction	Cavity Casework	304 Stainless Steel 304 Stainless Steel Coated Aluminium extrusions
Settings	Microwave Timer	100%,50%, Defrost Up to 10 minutes Up to 3 cooking stages of up to 10 minutes each Program

Product specifications:

Microcook TA Series

Microcook TA1725 & TA1925

Model Number: Model prefix + Turbo + Voltage + Frequency + Type

Model prefix	Turbo	Voltage	Frequency	Type
TA1725 **TA1925**	**MT** = Manual Turbo **VT** = Vend Turbo	**2**= 220-230V a.c. **4**= 230-240V a.c	**5** = 50 Hz **6** = 60 Hz	**UK** = UK model **EX** = Export model **EE** = Twin 13amp Lead **EX** = Single 30 amp Lead

Power Requirements	TA1725 TA1925	3.12kW 5.50kW (3.12kW + 2.38kW)
Power Output	TA1725 Microwave 100% Hot Air Combination TA1925 Microwave 100% Hot Air Combination	 1725W (IEC 705) 1400W 865W Microwave plus 1400W Hot Air 1925W (IEC 705) 2000W 1925W Microwave plus 2000W Hot Air
Power supply lead	TA1725 TA1925	13 Amp plug BS 1363A (UK only) 2 x 13 Amp plug BS 1363A (UK only) or 1 x 30Amp cable with plug BS4343 (UK only)
External Dimensions	Height Width Depth	475mm (Plus 50 mm minimum clearance above) 496mm (Plus 50 mm minimum clearance each side) 499mm (Plus 50 mm clearance behind)
Internal Dimensions	Height Width Depth Capacity	200mm 390mm 365mm 28.5 Litres (1.01ft³)
Weight	Nett Gross packed	42.5kg 45kg
Construction	Cavity Casework	304 Stainless Steel 304 Stainless Steel Coated Aluminium extrusions
Settings	Microwave Timer	TA1725 100%,50%, turbo TA1925 100%, heat only, turbo Up to 9 minutes 59 seconds Up to 3 Programmed cooking stages of up to 9 minutes 59 seconds each (total 29 minutes 57 seconds)

Installation instructions

Power Supply Requirements

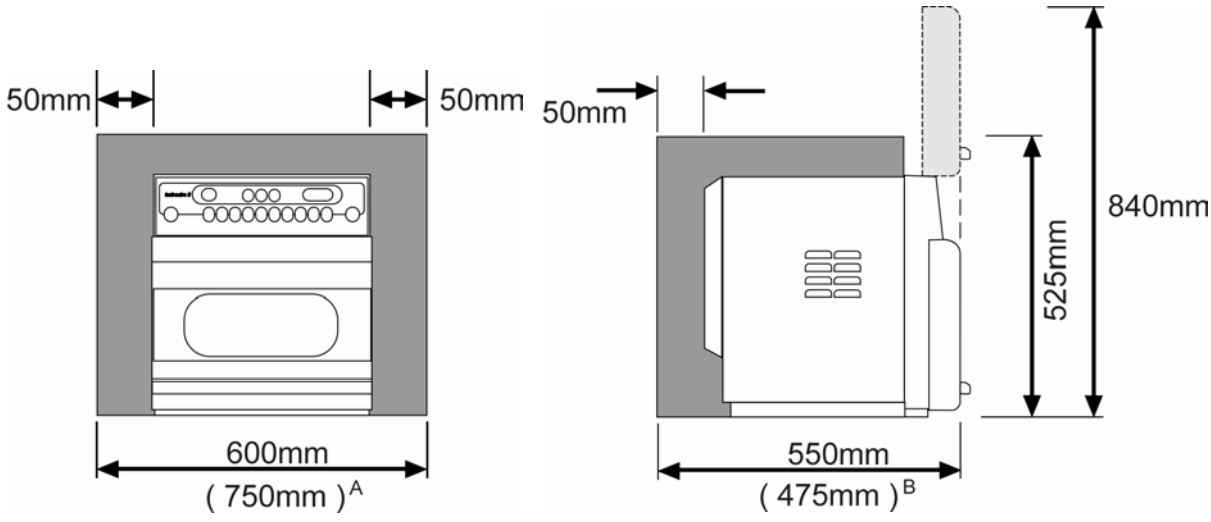
The Microcook HD & Microcook TA ovens should be connected to a suitable electricity supply, which can cope with the switching-on surge that occurs with certain types of catering equipment, such as microwaves. Because of this requirement, we strongly recommend that a separate, suitably rated supply is installed for the oven.

The supply for the oven should be fitted with a **Type "C"** circuit breaker, rated at 16A.

Positioning the Oven

In order to maintain adequate ventilation for air intake and exhaust, and to allow access for cleaning filters, you must allow a minimum of 50mm clearance all around the oven. Air intake temperature should not exceed 35°C - excessive temperature can lead to reduced operating duty cycle or premature ageing of internal components.

NEVER	Install an oven above fryers, grills, griddles or any other major heat source.
NEVER	Stack machines on top of each other
ALWAYS	Place containers in the cavity carefully - impact damage may chip the oven shelf.



A – HD2025 Model
B – HD1025 Model

Note:
The 840mm clearance at the front allows the complete removal of the door for cleaning

Error codes and diagnostics

The Microcook will identify some of the most common problems by flashing an error message code in the time display window.

These are the error messages, and suggestions for repairing them:

All HD & TA Models

Display		Fault (frequency)	Recommended Action
	1	Door not fully closed (permanent)	Check the door is fully closed. Check the door down LED is illuminated on the control board. Check ribbon connector condition and fit.
	2	Magnetron overheating (Intermittent)	Ensure the oven has been installed correctly. Check the magnetron cooling fan is operating and free from obstruction.
	1	Membrane panel failure (permanent)	Replace membrane panel.
	2	Membrane panel failure (Intermittent)	Replace membrane panel.
	3	Incorrect time set. (Intermittent)	Check correct time is set ie : 1.00 minute Not 60 seconds

KFC HD Models (with Fibre Optic Magnetron Detection)

Display		Fault (frequency)	Recommended Action
		LH Magnetron Failure	Check Power supply Replace magnetron(s)
		RH Magnetron Failure	
		Both magnetrons have failed	

TA Models

Display		Fault (frequency)	Recommended Action
	1	Microcook TA Convected hot air failure (permanent)	Check full / half wave LED on control board
	2	Intermittent	Check heating element

Procedure A - Power Output Test in accordance with BS EN 60335-2-90 Annex AA

This test is given in the BSI test standard for microwave ovens. It is reproduced below - not so that you can follow it, but to show you why it is impractical in normal conditions. A simplified procedure, which gives a good approximation to the BSI power output, is given in Procedure B which follows.

Note: This test can only be carried out on a **COLD** oven. If the oven has been operating, even for only a few seconds, the power given will be lower than the oven rating. This test must also be carried out at a stable voltage - the voltage in most kitchens varies considerably even within the period of the test. If the oven has been operating, go to **Procedure B.**

You will need:

A thermometer capable of reading to ±0.1°C.
A cylindrical borosilicate glass container, 190mm diameter, with a wall thickness of 3mm or less.
A calculator.
A set of scales capable of reading 1kg to an accuracy of ± 1g.
A glass or plastic stirrer.
A jug capable of holding over 1litre of water.
Drinkable water which is at a temperature of 10°C ± 1°C.
A "Variac" or similar variable transformer capable of supplying the oven to ensure a stable voltage.

WARNING: *The Borosilicate Glass container has thin walls and is therefore fragile - take care not to break it during use.*

Method

A cylindrical container of borosilicate glass is used for the test. It has a maximum thickness of 3mm, an external diameter of approximately 190mm and a height of approximately 90mm. The mass of the container is determined.

At the start of the test, the oven and the empty container are at ambient temperature. Potable water having an initial temperature of 10°C ± 1°C is used for the test. The temperature of the water is measured immediately before it is poured into the container.

A quantity of 1000g ± 5g of water is added to the container and its actual mass obtained. The container is then immediately placed in the middle of the oven shelf which is in its lowest normal position. The appliance is supplied at rated voltage and operated at the maximum power setting. The time for the water temperature to attain 20°C ± 2°C is measured. The oven is then switched off and the final water temperature is measured within 60'seconds.

NOTES:
1. The water is stirred before its temperature is measured.
2. Stirring and measuring devices are to have a low heat capacity.

The microwave power output is calculated from the formula:

$$P = \frac{4.187\, M_W\, (T_2-T_1) + 0.55\, M_C\, (T_2-T_0)}{t}$$

where

P is the microwave power output, in watts;
M_W is the mass of the water, in grams;
M_C is the mass of the container, in grams;
T_0 is the ambient temperature, in °C;
T_1 is the initial temperature of the water, in °C;
T_2 is the final temperature of the water, in °C;
t is the heating time in seconds, excluding the magnetron filament heat-up time.

Procedure B - Simplified Power Output Test

You will need:

A thermometer capable of reading to ±0.1°C.
A Polypropylene tray approximately 200mm x 200mm.
A measuring jug.
A calculator.
Water which is at a temperature of 10°C ± 2°C.

1 Measure 1 litre of cold water into the tray using the measuring jug.
2 Measure the water temperature, and record it as T[s].
3 Place the tray on the turntable in the oven and close the door.
4 Turn the oven on.
5 Set the timer to 1:02.
6 Press the “100%” power pad.
7 When the oven bleeps, open the door and remove the tray.
8 Stir the water thoroughly, and measure its temperature. Record this as T[e].

Calculation:

1 T[r] = T[e] - T[s]
2 Power = 70 x T[r]. Power is in Watts

The power given by the above test should be within ±10% of the rated power.

Procedure C - Power Transformer Test

You will need:
A Digital Multi-meter (D.M.M.)
A Megger or similar resistance meter using 500V d.c.

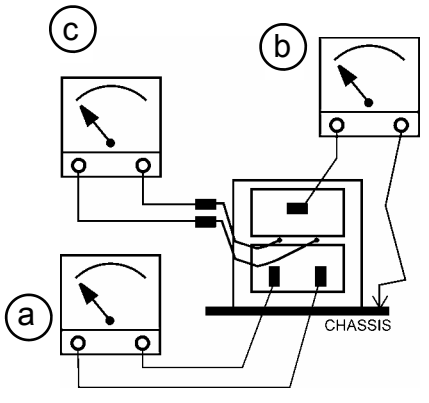
1 Isolate the oven from the mains supply.

WARNING: *High voltages and large currents are present at the secondary winding and filament winding of the Power Transformer. It is very dangerous to work near this part when the oven is on. NEVER make any voltage measurements at the High Voltage circuits, including the magnetron filament.*

WARNING: *Even when the oven is not cooking, the Power Transformer has High Voltages present because of the Soft Start circuit. Isolate the oven before testing.*

2 Ensure that the High Voltage Capacitor is discharged before commencing work.
3 Remove all connections from the Power Transformer.
4 Using a D.M.M., check the continuity of the windings. Results should be as follows:

a	Mains winding between tags	Approx. 1.3 Ω
b	High Voltage winding	Approx. 82 Ω
c	Filament winding between terminals	Less than 1 Ω



5 Using a Megger, test the insulation resistance between:

Primary winding and chassis	Pass if over 10 MΩ
Filament winding and chassis	Pass if over 10 MΩ

One end of the High Voltage winding is connected to the chassis, so this is not tested.

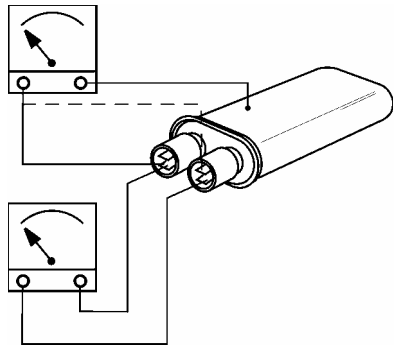
Procedure D - High Voltage Capacitor Test

You will need: A Digital Multi-meter (D.M.M.)
A Megger or similar resistance meter using 500V d.c.

WARNING: High voltages and large currents are present at the High Voltage Capacitor. It is very dangerous to work near this part when the oven is on. **NEVER** make any voltage measurements at the High Voltage circuits, including the magnetron filament .

WARNING: Even when the oven is not cooking, the High Voltage Capacitor has High Voltages present because of the Soft Start circuit. Isolate the oven before testing.

1. Isolate the oven from the mains supply.
2. Ensure that the High Voltage Capacitor is discharged before commencing work.
3. Remove all connections from the High Voltage Capacitor.
4. Using a D.M.M., check for continuity between the terminals & compare results with table.



Between Terminals	Pass if approximately 10 MΩ
Between Terminals and Case	Pass if open circuit

5. Using a Megger, test the insulation resistance between the terminals and the case.

Between Terminals and Case	Pass if over 100 MΩ

Procedure E - High Voltage Rectifier Test

You will need:

A Megger or similar resistance meter using 500V d.c.

WARNING: High voltages and large currents are present at the High Voltage Rectifier. It is very dangerous to work near this part when the oven is on. NEVER make any voltage measurements at the High Voltage circuits, including the magnetron filament .

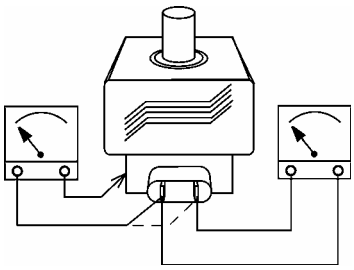
WARNING: Even when the oven is not cooking, the High Voltage Rectifier has High Voltages present because of the Soft Start circuit. Isolate the oven before testing.

1. Isolate the oven from the mains supply.
2. Ensure that the High Voltage Capacitor is discharged before commencing work.
3. Remove all connections from the High Voltage Rectifier.
4. Using the Megger, test for continuity in both directions. Compare results with the table.

Open Circuit both ways	**FAIL**
Conducts one way only	**PASS**
Short Circuit both ways	**FAIL**
Conducts one way, leaks the other	**FAIL**

Procedure F - Magnetron Test

You will need:
A Megger or similar resistance meter using 500V d.c.

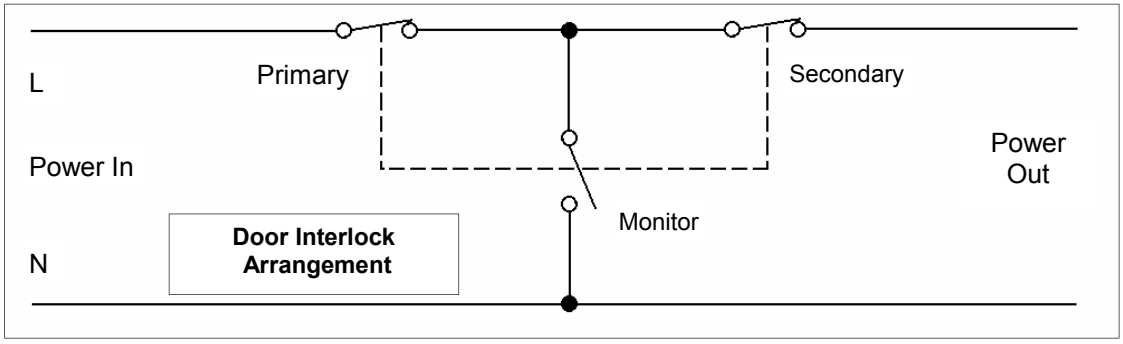


A Magnetron can be tested for an open filament or a short circuit by carrying out a continuity check.

1. Isolate the oven from the mains supply.
2. Ensure that the High Voltage Capacitor is discharged before commencing work.
3. Remove all connections from the Magnetron.
4. A continuity check across the Filament terminals should be 1ohm or less
5. A continuity check between each filament terminal and the metal outer should read open.

Door interlock operation

The door on the Microcook oven is monitored by three microswitches used in the conventional “Primary, Secondary and Monitor” switch arrangement shown below.

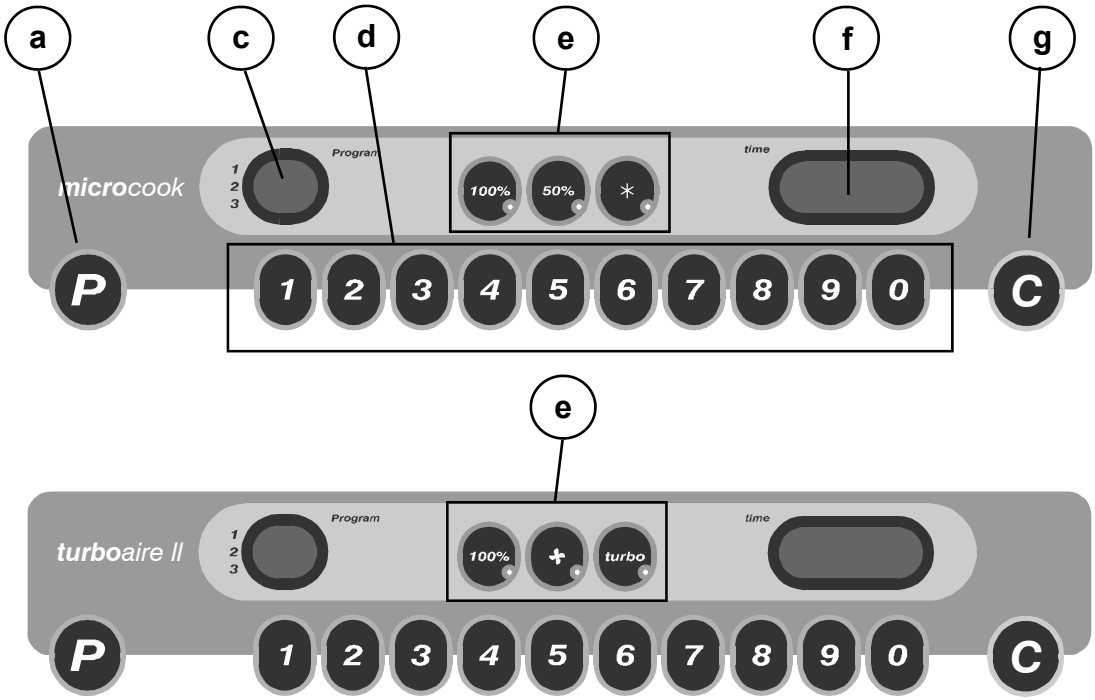


The switches operate as follows:

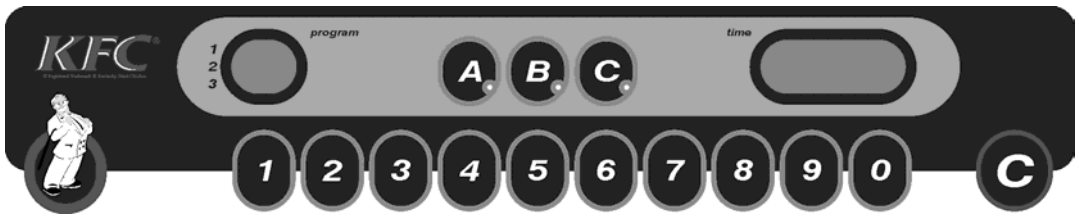
1. Monitor Switch [TopRight]. As the door is closed, the monitor switch is opened.
2. Primary Interlock Switch [Bottom Left]. The Primary switch is then closed.
3. Secondary Interlock Switch [Bottom Right]. The Secondary Switch then closes.

When the door is opened, the switches operate in the reverse order.

Main features



Vend model (KFC)



Description of Features

a. Program Pad

b. On/Off Switch

c. Program Display

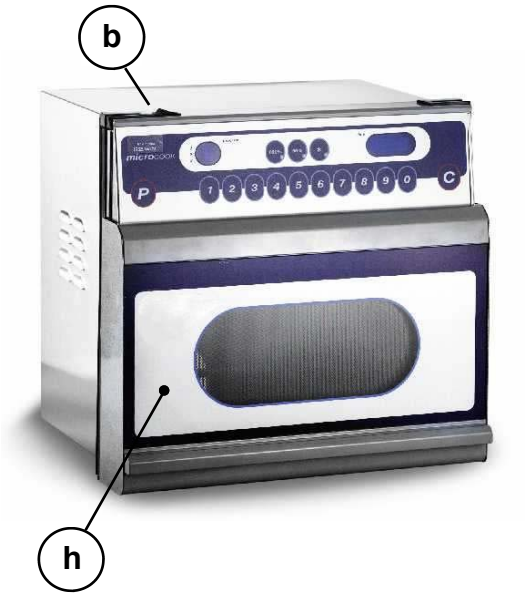
d. Program Selection / Time Set Pads

e. Power Selection Pads
HD models:100%, 50% & de-frost
TA models:100%, hot-air & turbo

f. Time Display

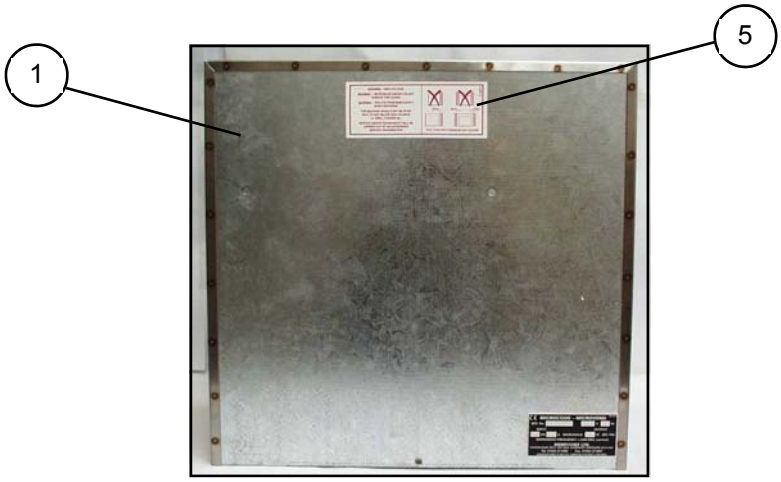
g. Cancel / Callback Pad

h. Door



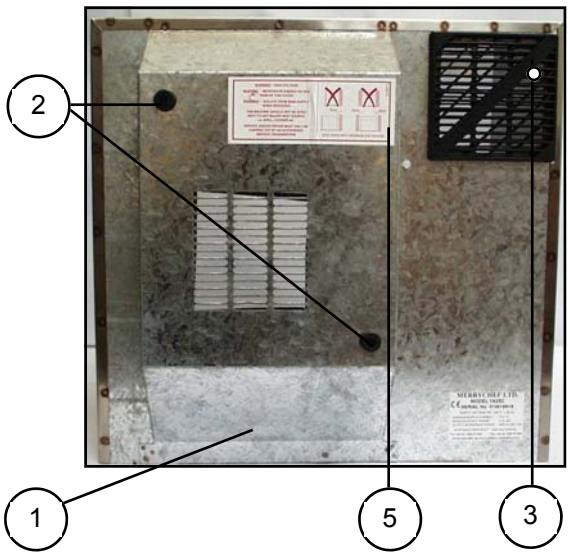
Rear cover assembly

HD1025 only Rear View

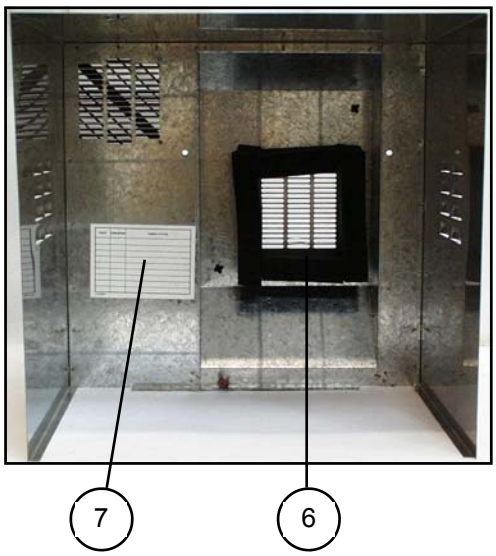


All other models

Outer View

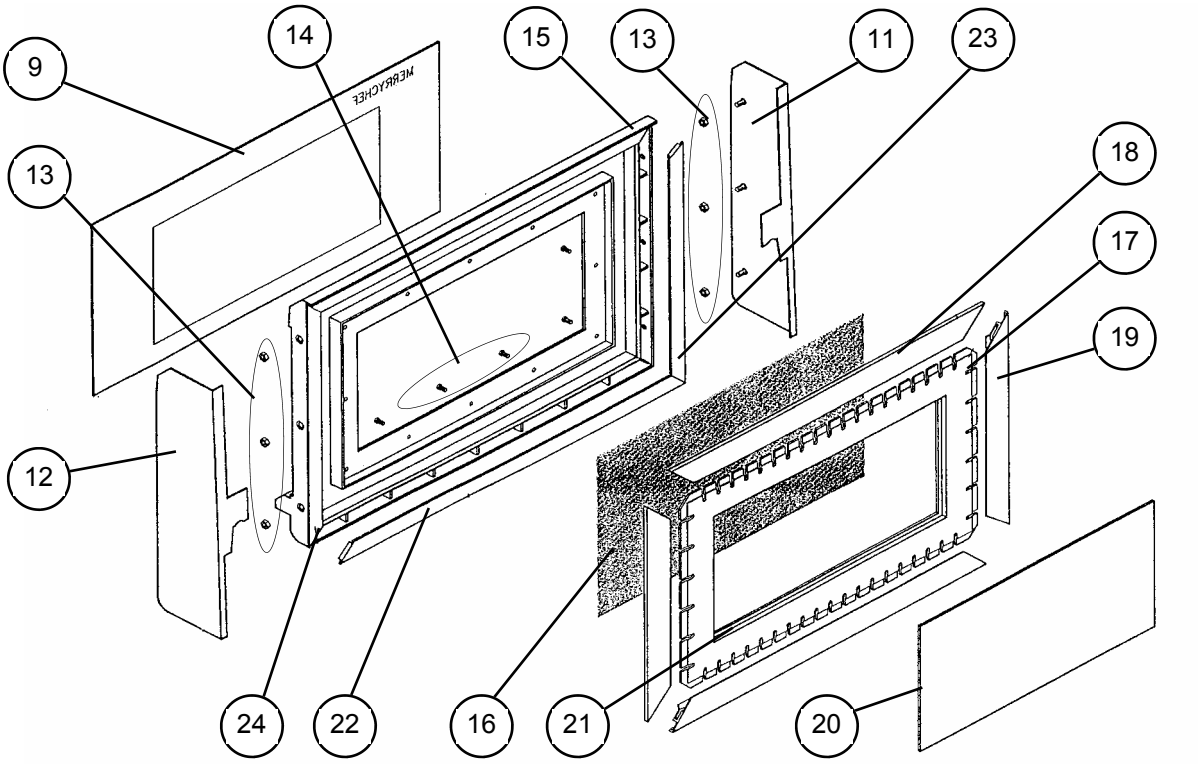


Inner View



No	Description	HD1025	HD1425	HD1725	HD1925	HD2025	TA
1	Rear Cover	40M0883	11M0269	11M0269	11M0269	11M0270	11M0269
2	Push Fit Feet	—	31Z1187	31Z1187	31Z1187	31Z1187	31Z1187
3	Air filter	—	31Z1104	31Z1104	31Z1104	31Z1104	31Z1104
4a	Screw M5x16	31Z3022	31Z3022	31Z3022	31Z3022	31Z3022	31Z3022
4b	M5 Star Washer	31Z5012	31Z5012	31Z5012	31Z5012	31Z5012	31Z5012
5	Installation Label	31Z2071	31Z2071	31Z2071	31Z2071	31Z2071	31Z2071
6	Self Adhesive Foam Tape	—	31Z0158	31Z0158	31Z0158	31Z0158	31Z0158
7	Service History Label	31Z2056	31Z2056	31Z2056	31Z2056	31Z2056	31Z2056

Die–cast door (500mm) assembly 11M0302

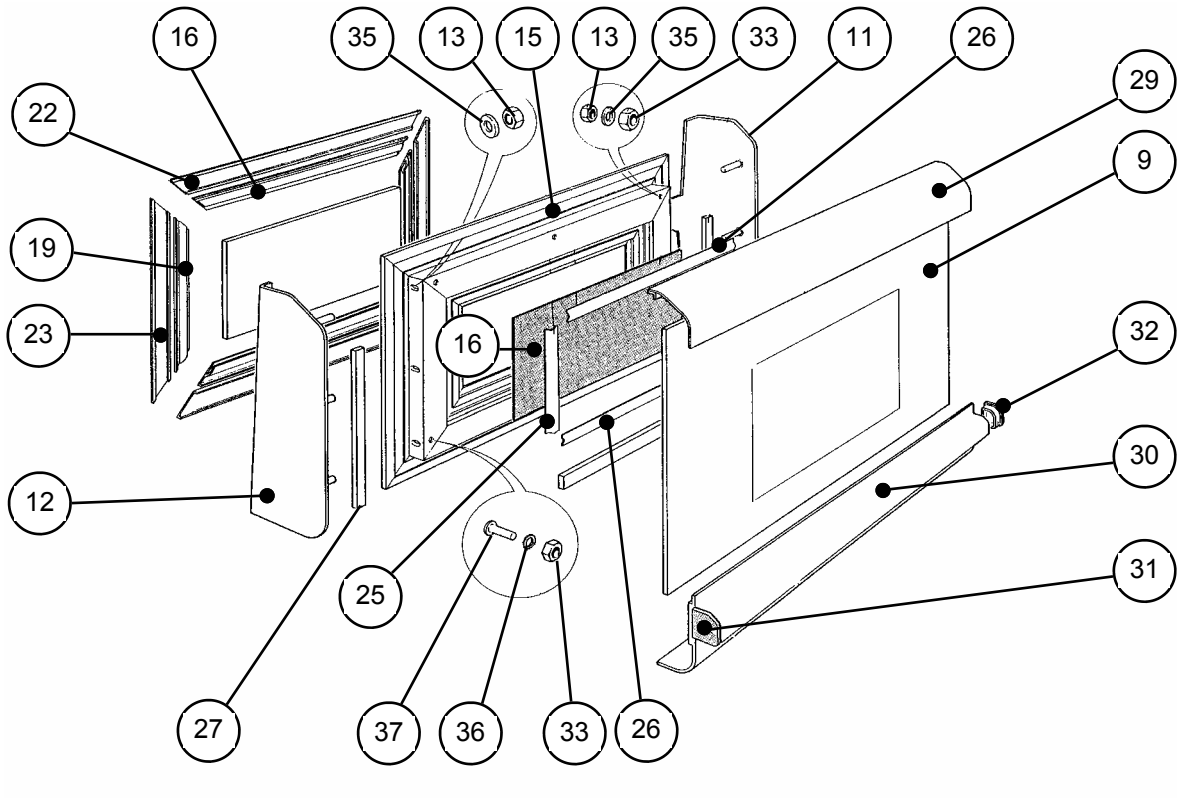


Note: Parts 18 & 19 choke filler are now one piece
Except on HD2025 model

No	Description	HD1025	HD1425	HD1725	HD1925	HD2025	TA
8*	Door Assembly	11M0302	11M0302	11M0302	11M0302	11M0258	11M0302
9*	Door Screen Blue	40M0923	40M0923	40M0923	40M0923	40M0858	40M0923
10	Double Sided Tape	30Z0477	30Z0477	30Z0477	30Z0477	—	30Z0477
11	Doorside L/H	40M0919	40M0919	40M0919	40M0919	40M0801	40M0919
12	Doorside R/H	40M0920	40M0920	40M0920	40M0920	40M0802	40M0920
13	Fixing Nut (M5)	31Z4013	31Z4013	31Z4013	31Z4013	31Z4013	31Z4013
14	Fixing Bolt (M5 x 16)	31Z3022	31Z3022	31Z3022	31Z3022		31Z3022
15	Door Main Body	40M0839	40M0839	40M0839	40M0839	40M0855	40M0839
16	Door Mesh	40M0841	40M0841	40M0841	40M0841	40M0860	40M0841
17	Door Choke	40M0840	40M0840	40M0840	40M0840	—	40M0840
18	Choke Filler Horizontal	40M0931	40M0931	40M0931	40M0931	40M0862	40M0931
19	Choke Filler Vertical					40M0747	
20	Inner Door Glass	20Z1075	20Z1075	20Z1075	20Z1075	40M0859	20Z1075
21	Silicone Sealant (White)	31Z0098	31Z0098	31Z0098	31Z0098	31Z0098	31Z0098
22	Door Seal Horizontal	40M0927	40M0927	40M0927	40M0927	40M0861	40M0927
23	Door Seal Vertical	40M0926	40M0926	40M0926	40M0926	2070499	40M0926
24	Loctite Gel	32Z5005	32Z5005	32Z5005	32Z5005	32Z5005	32Z5005

*Note: KFC see Appendix 1

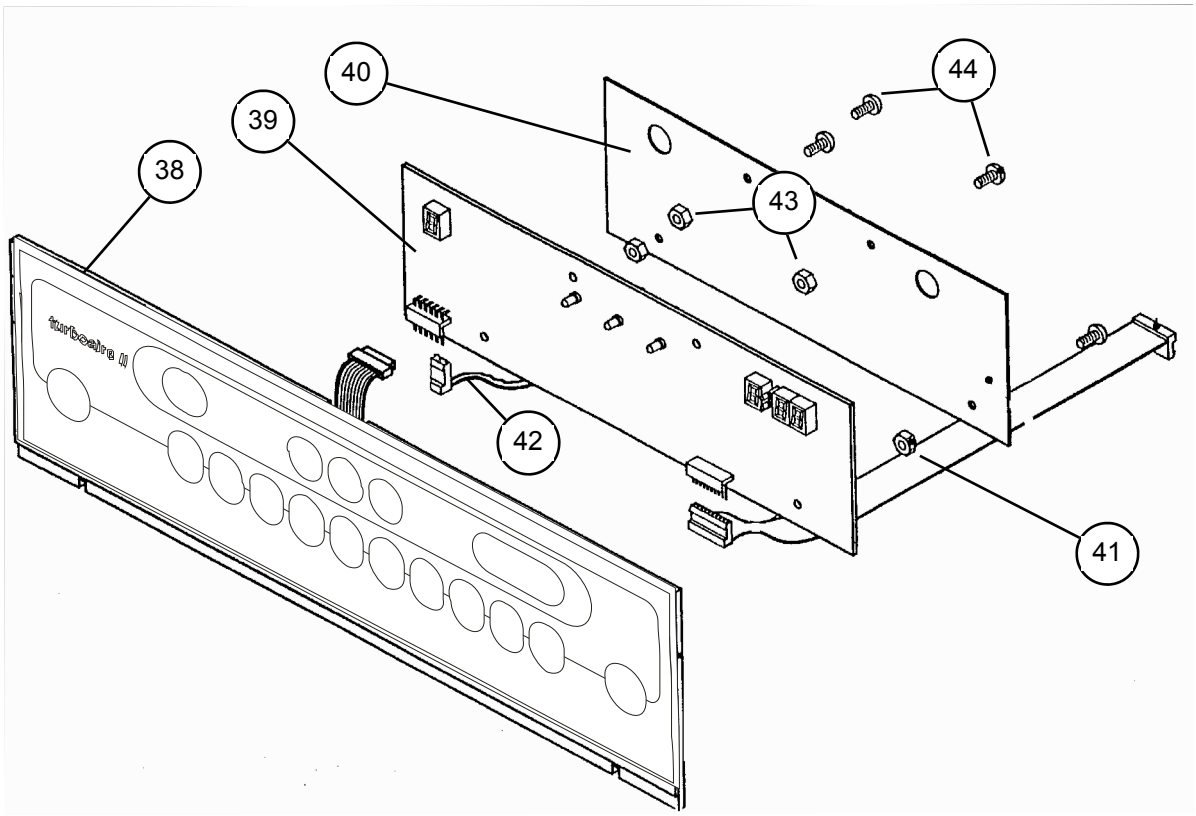
Door (650mm) assembly 11M0258



No	Description	HD1025	HD1425	HD1725	HD1925	HD2025	TA
9	Door Screen Blue	40M0923	40M0923	40M0923	40M0923	40M0858	40M0923
11	Doorside L/H	40M0919	40M0919	40M0919	40M0919	40M0801	40M0919
12	Doorside R/H	40M0920	40M0920	40M0920	40M0920	40M0802	40M0920
13	Fixing Nut (M5)	31Z4013	31Z4013	31Z4013	31Z4013	31Z4013	31Z4013
14	Fixing Bolt (M5 x 16)	31Z3022	31Z3022	31Z3022	31Z3022		31Z3022
15	Door Main Body	40M0839	40M0839	40M0839	40M0839	40M0855	40M0839
16	Door Mesh	40M0841	40M0841	40M0841	40M0841	40M0860	40M0841
17	Door Choke	40M0840	40M0840	40M0840	40M0840	—	40M0840
18	Choke Filler Horizontal	40M0931	40M0931	40M0931	40M0931	40M0862	40M0931
19	Choke Filler Vertical					40M0747	
20	Inner Door Glass	20Z1075	20Z1075	20Z1075	20Z1075	40M0859	20Z1075
21	Silicone Sealant (White)	31Z0098	31Z0098	31Z0098	31Z0098	31Z0098	31Z0098
22	Door Seal Horizontal	40M0927	40M0927	40M0927	40M0927	40M0861	40M0927
23	Door Seal Vertical	40M0926	40M0926	40M0926	40M0926	20Z0499	40M0926
24	Loctite Gel	32Z5005	32Z5005	32Z5005	32Z5005	32Z5005	32Z5005
25	Door Mesh Spring (Vertical)	—	—	—	—	20Z0338	—
26	Door Mesh Spring (Horizontal)	—	—	—	—	40M0863	—
27	Door Packer	—	—	—	—	20Z0488	—
28	Tessa Tape	31Z0042	31Z0042	31Z0042	31Z0042	31Z0042	31Z0042
29	Top Door Trim	—	—	—	—	40M0856	—
30	Door Handle	—	—	—	—	40M0857	—
31	Handle End Cap L/H	—	—	—	—	40M0523	—
32	Handle End Cap R/H	—	—	—	—	40M0524	—
33	M6 Full Nut	—	—	—	—	31Z4009	—
35	M5 Flat Washer	—	—	—	—	31Z5008	—
36	M5 Shakeproof Washer	—	—	—	—	31Z5012	—
37	M5 x 16 Pan Head Screw	—	—	—	—	31Z3022	—

Control panel assembly (For KFC models see Appendix 1)

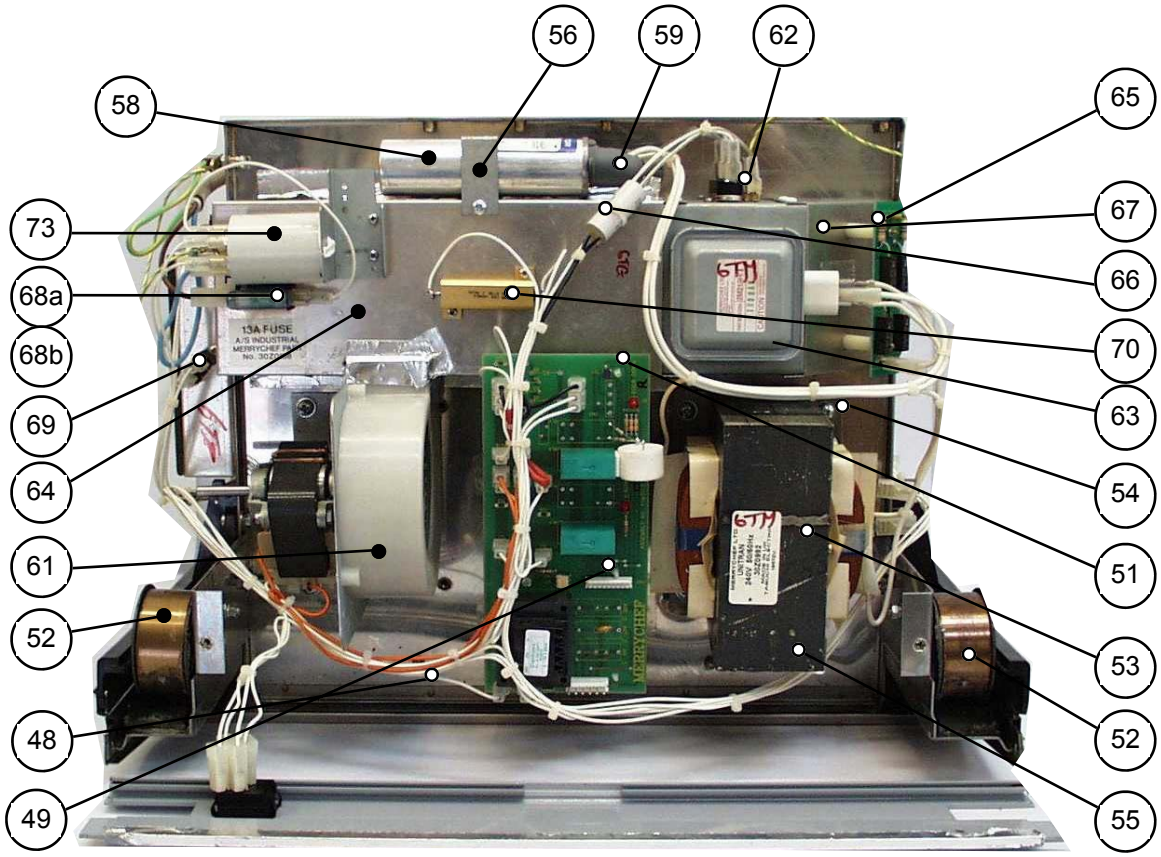
See Appendix 6 for Logic Board connections and jumper details



No	Description	All Models
40	Electrostatic Screen	40M0464
41	Ribbon Connector (10 Way)	11M0117
42	Filtered Wire Assembly	11M0333
43	M4 Nylon Face Nut	31Z4014
44	M3 x 12 Hex Head	31Z3117

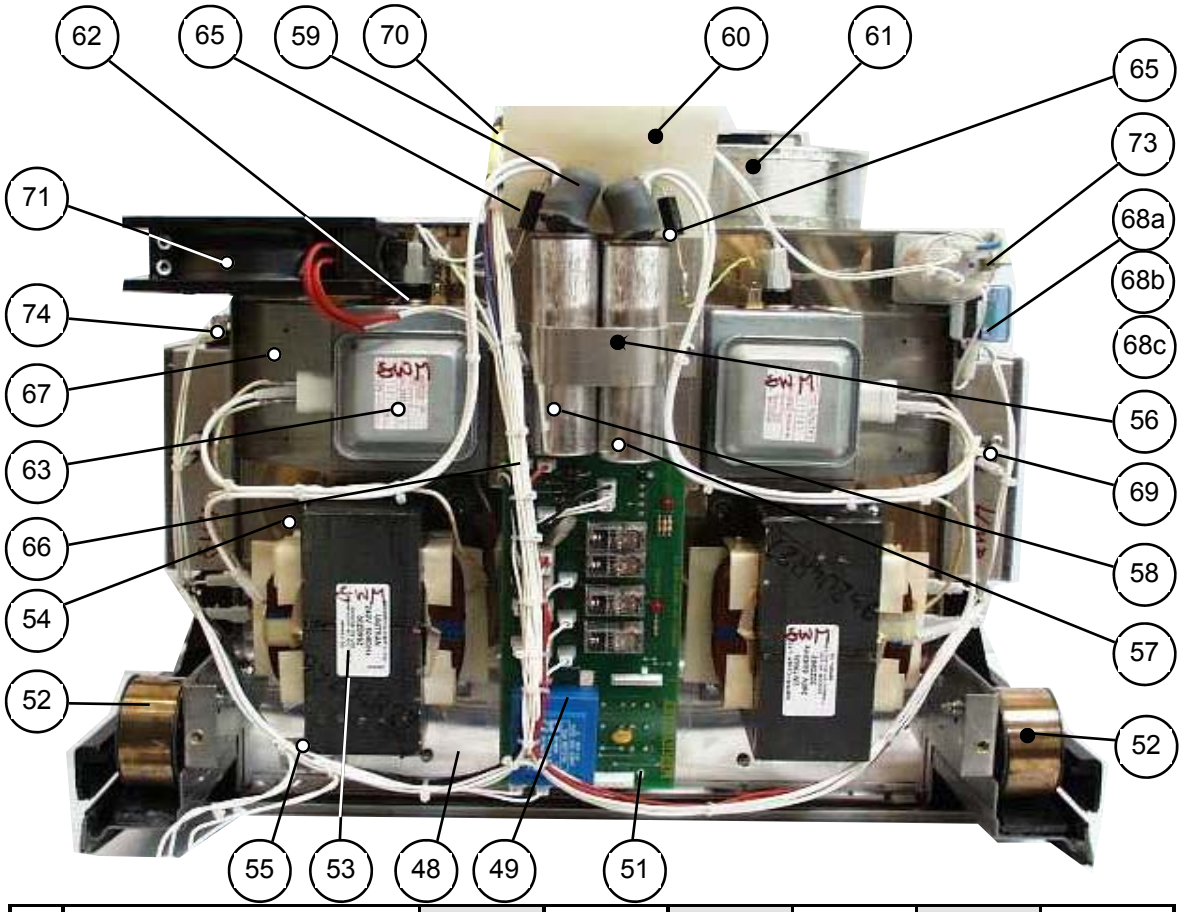
No.	Description	Colour	HD1025	HD1425 HD1925	HD2025	TA1725	TA1925
9	Door screen	Red/Grey	40M0923	40M0923	40M0858	40M0923	40M0923
9	Door screen	Blue	40M1053	40M1053	40M1054	40M1053	40M1053
38	Switch Panel Assy	Red/Grey	11M0108	11M0108	11M0110	11M0299	11M0395
38	Switch Panel Assy	Blue	11M0387	11M0387	11M0388	11M0386	11M0395
39	Logic Board	———	11M0107	11M0107	11M0107	11M0359	11M0359
49	PCB relay	———	11M0285	11M0427	11M0427	11M0430	11M0430
50	Fan Control PCB	———	———	———	———	11M0261	11M0261

Component layout: HD1025



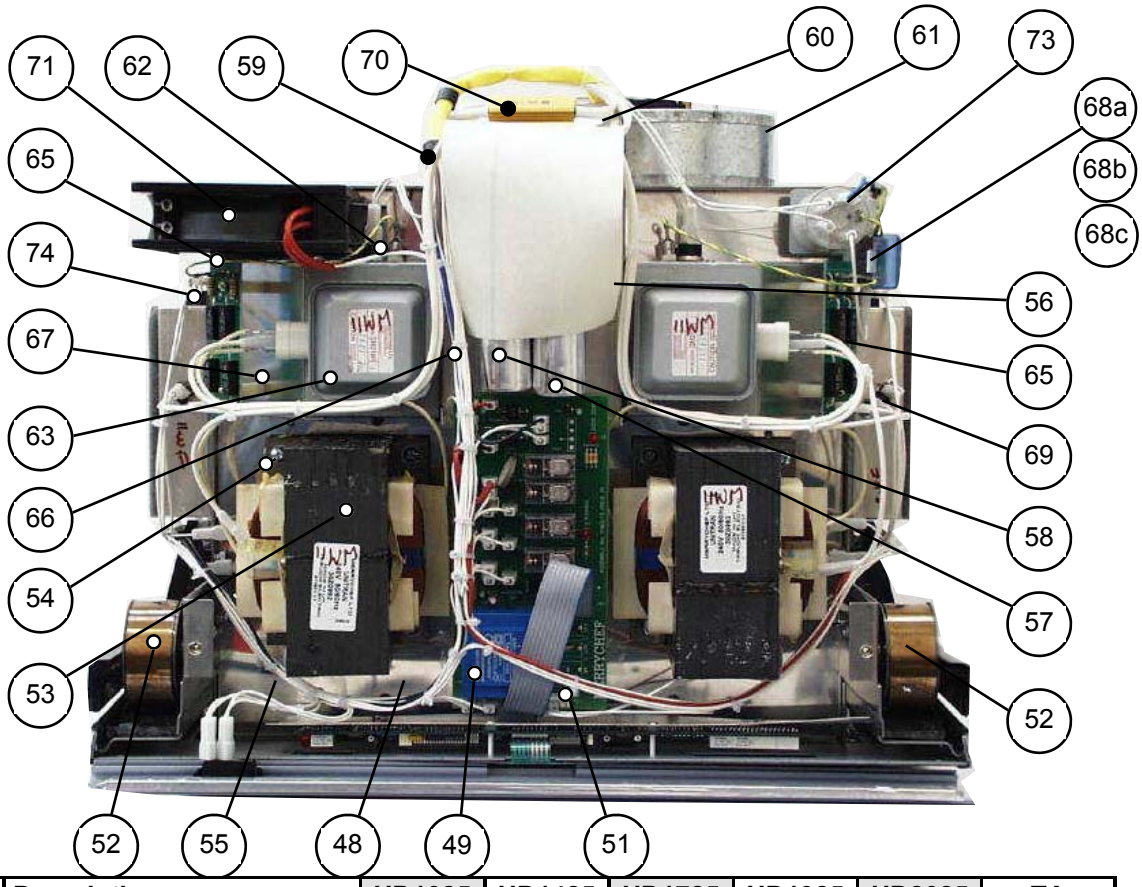
No	Description	HD1025	HD1425	HD1725	HD1925	HD2025	TA
48	Cavity	10M0026	10M0026	10M0026	10M0026	10M0102	10M0106
49	Relay Board	11M0285	11M0427	11M0427	11M0427	11M0427	11M0430
50	Fan Control Pcb	—	—	—	—	—	11M0261
51	PCB Stand-off	31Z7010	31Z7010	31Z7010	31Z7010	31Z7010	31Z7010
52	Door Spring Kit	11M0353	11M0353	11M0353	11M0353	11M0354	11M0353
53	Transformer	30Z0992	30Z0992	30Z0992	30Z0992	30Z0992	30Z0992
54	Transformer Spacer	20Z0787	20Z0787	20Z0787	20Z0787	20Z0787	20Z0787
55	Safe Edge Cover	40M0614	40M0614	40M0614	40M0614	40M0614	40M0614
56	Capacitor Clip	40H0046	40M0600	40M0600	40M0600	40M0600	40M0889
57	Capacitor L/H	See Appendix 2					
58	Capacitor R/H						
59	Protective Boot	31Z0167	31Z0167	31Z0167	31Z0167	31Z0167	31Z0167
60	Nomex Cover	—	40M0973	40M0973	40M0973	40M0973	—
61	Magnetron Cooling Fan	30Z0921	30Z0270	30Z0270	30Z0270	30Z0270	30Z0270
62	Thermal Trip (Magnetron)	25Z1016	30Z0257	30Z0257	30Z0257	30Z0257	30Z0257
63	Magnetron	See Appendix 2					
64	Cold Air Duct	40M0884	40M0544	40M0544	40M0544	40M0544	40M0544
65	Diode Assembly	11M0343	11M0343	11M0343	11M0343	11M0343	11M0343
66	Delta Filter	31Z0126	31Z0126	31Z0126	31Z0126	31Z0126	31Z0126
67	Air Outlet Duct	40M0509	40M0509	40M0509	40M0509	40M0509	40M0509
68a	Fuse Holder	30Z0231	30Z0231	30Z0231	30Z0231	30Z0231	30Z0231
68b	Fuse	30Z0168	30Z0168	30Z0168	30Z0168	30Z0168	30Z0168
68c	Fuse Cover	20Z1080	20Z1080	20Z1080	20Z1080	20Z1080	20Z1080
69	Thermal Trip (Oven)	30Z1011	30Z1011	30Z1011	30Z1011	30Z1011	30Z1011
70	Gold Resistor	30Z0283	30Z0283	30Z0283	30Z0283	30Z0283	30Z0283
71	Axial Fan	—	30Z0941	30Z0941	30Z0941	30Z0941	30Z0941
72	Axial Fan Bracket	—	40M0541	40M0541	40M0541	40M0541	40M0541
73	Mains Filter	30Z0997	30Z0997	30Z0997	30Z0997	30Z0997	30Z0997
74	Lampshield	40M0492	40M0492	40M0492	40M0492	40M0492	40M0872

Component layout: HD1425 & HD1725



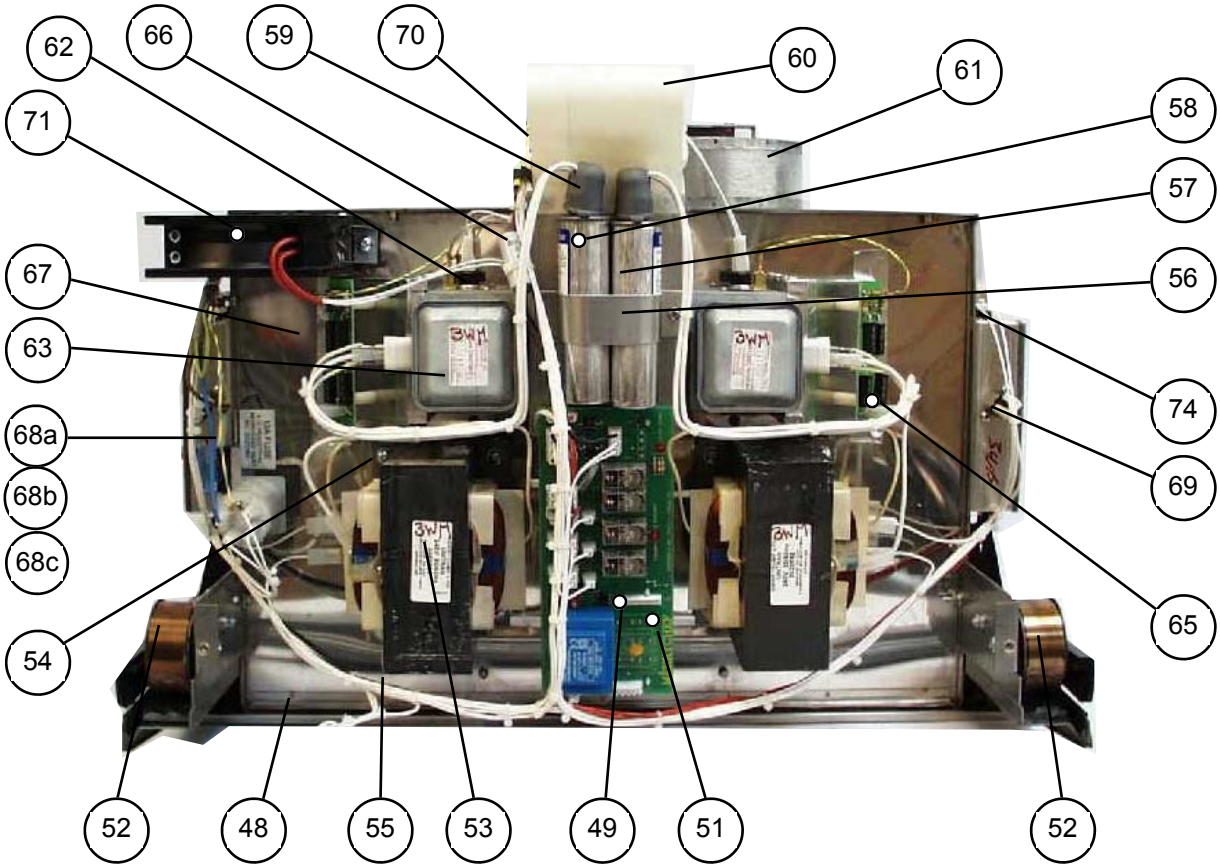
No	Description	HD1025	HD1425	HD1725	HD1925	HD2025	TA
48	Cavity	10M0026	10M0026	10M0026	10M0026	10M0102	10M0106
49	Relay Board	11M0285	11M0427	11M0427	11M0427	11M0427	11M0430
50	Fan Control Pcb	—	—	—	—	—	11M0261
51	PCB Stand-off	31Z7010	31Z7010	31Z7010	31Z7010	31Z7010	31Z7010
52	Door Spring Kit	11M0353	11M0353	11M0353	11M0353	11M0354	11M0353
53	Transformer	30Z0992	30Z0992	30Z0992	30Z0992	30Z0992	30Z0992
54	Transformer Spacer	20Z0787	20Z0787	20Z0787	20Z0787	20Z0787	20Z0787
55	Safe Edge Cover	40M0614	40M0614	40M0614	40M0614	40M0614	40M0614
56	Capacitor Clip	40H0046	40M0600	40M0600	40M0600	40M0600	40M0889
57	Capacitor L/H	See Appendix 2					
58	Capacitor R/H						
59	Protective Boot	31Z0167	31Z0167	31Z0167	31Z0167	31Z0167	31Z0167
60	Nomex Cover	—	40M0973	40M0973	40M0973	40M0973	—
61	Magnetron Cooling Fan	30Z0921	30Z0270	30Z0270	30Z0270	30Z0270	30Z0270
62	Thermal Trip (Magnetron)	25Z1016	30Z0257	30Z0257	30Z0257	30Z0257	30Z0257
63	Magnetron	See Appendix 2					
64	Cold Air Duct	40M0884	40M0544	40M0544	40M0544	40M0544	40M0544
65	Diode Assembly	11M0343	11M0343	11M0343	11M0343	11M0343	11M0343
66	Delta Filter	31Z0126	31Z0126	31Z0126	31Z0126	31Z0126	31Z0126
67	Air Outlet Duct	40M0509	40M0509	40M0509	40M0509	40M0509	40M0509
68a	Fuse Holder	30Z0231	30Z0231	30Z0231	30Z0231	30Z0231	30Z0231
68b	Fuse	30Z0168	30Z0168	30Z0168	30Z0168	30Z0168	30Z0168
68c	Fuse Cover	20Z1080	20Z1080	20Z1080	20Z1080	20Z1080	20Z1080
69	Thermal Trip (Oven)	30Z1011	30Z1011	30Z1011	30Z1011	30Z1011	30Z1011
70	Gold Resistor	30Z0283	30Z0283	30Z0283	30Z0283	30Z0283	30Z0283
71	Axial Fan	—	30Z0941	30Z0941	30Z0941	30Z0941	30Z0941
72	Axial Fan Bracket	—	40M0541	40M0541	40M0541	40M0541	40M0541
73	Mains Filter	30Z0997	30Z0997	30Z0997	30Z0997	30Z0997	30Z0997
74	Lampshield	40M0492	40M0492	40M0492	40M0492	40M0492	40M0872

Component layout: HD1925 (For KFC see Appendix 1)



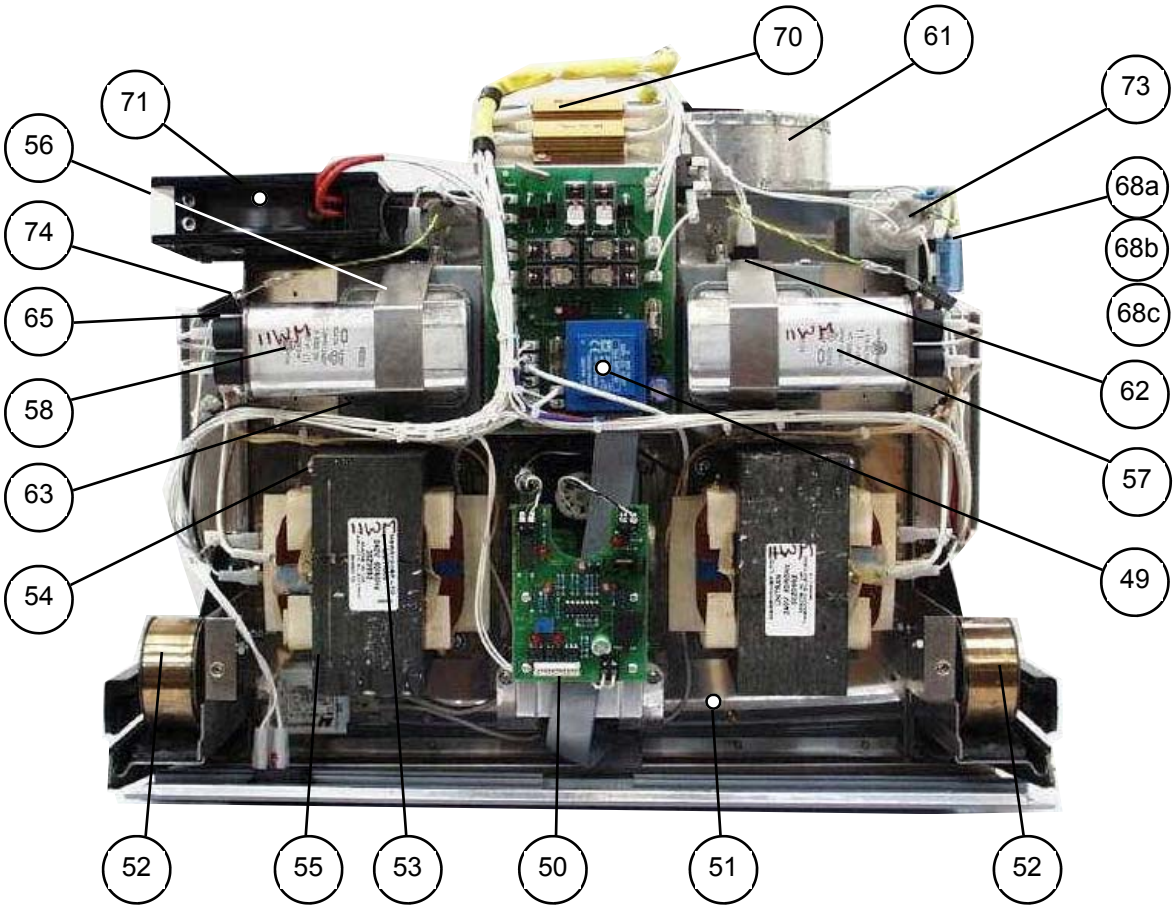
No	Description	HD1025	HD1425	HD1725	HD1925	HD2025	TA
48	Cavity	10M0026	10M0026	10M0026	10M0026	10M0102	10M0106
49	Relay Board	11M0285	11M0427	11M0427	11M0427	11M0427	11M0430
50	Fan Control Pcb	—	—	—	—	—	11M0261
51	PCB Stand-off	31Z7010	31Z7010	31Z7010	31Z7010	31Z7010	31Z7010
52	Door Spring Kit	11M0353	11M0353	11M0353	11M0353	11M0354	11M0353
53	Transformer	30Z0992	30Z0992	30Z0992	30Z0992	30Z0992	30Z0992
54	Transformer Spacer	20Z0787	20Z0787	20Z0787	20Z0787	20Z0787	20Z0787
55	Safe Edge Cover	40M0614	40M0614	40M0614	40M0614	40M0614	40M0614
56	Capacitor Clip	40H0046	40M0600	40M0600	40M0600	40M0600	40M0889
57	Capacitor L/H	See Appendix 2					
58	Capacitor R/H						
59	Protective Boot	31Z0167	31Z0167	31Z0167	31Z0167	31Z0167	31Z0167
60	Nomex Cover	—	40M0973	40M0973	40M0973	40M0973	—
61	Magnetron Cooling Fan	30Z0921	30Z0270	30Z0270	30Z0270	30Z0270	30Z0270
62	Thermal Trip (Magnetron)	25Z1016	30Z0257	30Z0257	30Z0257	30Z0257	30Z0257
63	Magnetron	See Appendix 2					
64	Cold Air Duct	40M0884	40M0544	40M0544	40M0544	40M0544	40M0544
65	Diode Assembly	11M0343	11M0343	11M0343	11M0343	11M0343	11M0343
66	Delta Filter	31Z0126	31Z0126	31Z0126	31Z0126	31Z0126	31Z0126
67	Air Outlet Duct	40M0509	40M0509	40M0509	40M0509	40M0509	40M0509
68a	Fuse Holder	30Z0231	30Z0231	30Z0231	30Z0231	30Z0231	30Z0231
68b	Fuse	30Z0168	30Z0168	30Z0168	30Z0168	30Z0168	30Z0168
68c	Fuse Cover	20Z1080	20Z1080	20Z1080	20Z1080	20Z1080	20Z1080
69	Thermal Trip (Oven)	30Z1011	30Z1011	30Z1011	30Z1011	30Z1011	30Z1011
70	Gold Resistor	30Z0283	30Z0283	30Z0283	30Z0283	30Z0283	30Z0283
71	Axial Fan	—	30Z0941	30Z0941	30Z0941	30Z0941	30Z0941
72	Axial Fan Bracket	—	40M0541	40M0541	40M0541	40M0541	40M0541
73	Mains Filter	30Z0997	30Z0997	30Z0997	30Z0997	30Z0997	30Z0997
74	Lampshield	40M0492	40M0492	40M0492	40M0492	40M0492	40M0872

Component layout: HD2025



No	Description	HD1025	HD1425	HD1725	HD1925	HD2025	TA
48	Cavity	10M0026	10M0026	10M0026	10M0026	10M0102	10M0106
49	Relay Board	11M0285	11M0427	11M0427	11M0427	11M0427	11M0430
50	Fan Control Pcb	—	—	—	—	—	11M0261
51	PCB Stand-off	31Z7010	31Z7010	31Z7010	31Z7010	31Z7010	31Z7010
52	Door Spring Kit	11M0353	11M0353	11M0353	11M0353	11M0354	11M0353
53	Transformer	30Z0992	30Z0992	30Z0992	30Z0992	30Z0992	30Z0992
54	Transformer Spacer	20Z0787	20Z0787	20Z0787	20Z0787	20Z0787	20Z0787
55	Safe Edge Cover	40M0614	40M0614	40M0614	40M0614	40M0614	40M0614
56	Capacitor Clip	40H0046	40M0600	40M0600	40M0600	40M0600	40M0889
57	Capacitor L/H	See Appendix 2					
58	Capacitor R/H						
59	Protective Boot	31Z0167	31Z0167	31Z0167	31Z0167	31Z0167	31Z0167
60	Nomex Cover	—	40M0973	40M0973	40M0973	40M0973	—
61	Magnetron Cooling Fan	30Z0921	30Z0270	30Z0270	30Z0270	30Z0270	30Z0270
62	Thermal Trip (Magnetron)	25Z1016	30Z0257	30Z0257	30Z0257	30Z0257	30Z0257
63	Magnetron	See Appendix 2					
64	Cold Air Duct	40M0884	40M0544	40M0544	40M0544	40M0544	40M0544
65	Diode Assembly	11M0343	11M0343	11M0343	11M0343	11M0343	11M0343
66	Delta Filter	31Z0126	31Z0126	31Z0126	31Z0126	31Z0126	31Z0126
67	Air Outlet Duct	40M0509	40M0509	40M0509	40M0509	40M0509	40M0509
68a	Fuse Holder	30Z0231	30Z0231	30Z0231	30Z0231	30Z0231	30Z0231
68b	Fuse	30Z0168	30Z0168	30Z0168	30Z0168	30Z0168	30Z0168
68c	Fuse Cover	20Z1080	20Z1080	20Z1080	20Z1080	20Z1080	20Z1080
69	Thermal Trip (Oven)	30Z1011	30Z1011	30Z1011	30Z1011	30Z1011	30Z1011
70	Gold Resistor	30Z0283	30Z0283	30Z0283	30Z0283	30Z0283	30Z0283
71	Axial Fan	—	30Z0941	30Z0941	30Z0941	30Z0941	30Z0941
72	Axial Fan Bracket	—	40M0541	40M0541	40M0541	40M0541	40M0541
73	Mains Filter	30Z0997	30Z0997	30Z0997	30Z0997	30Z0997	30Z0997
74	Lampshield	40M0492	40M0492	40M0492	40M0492	40M0492	40M0872

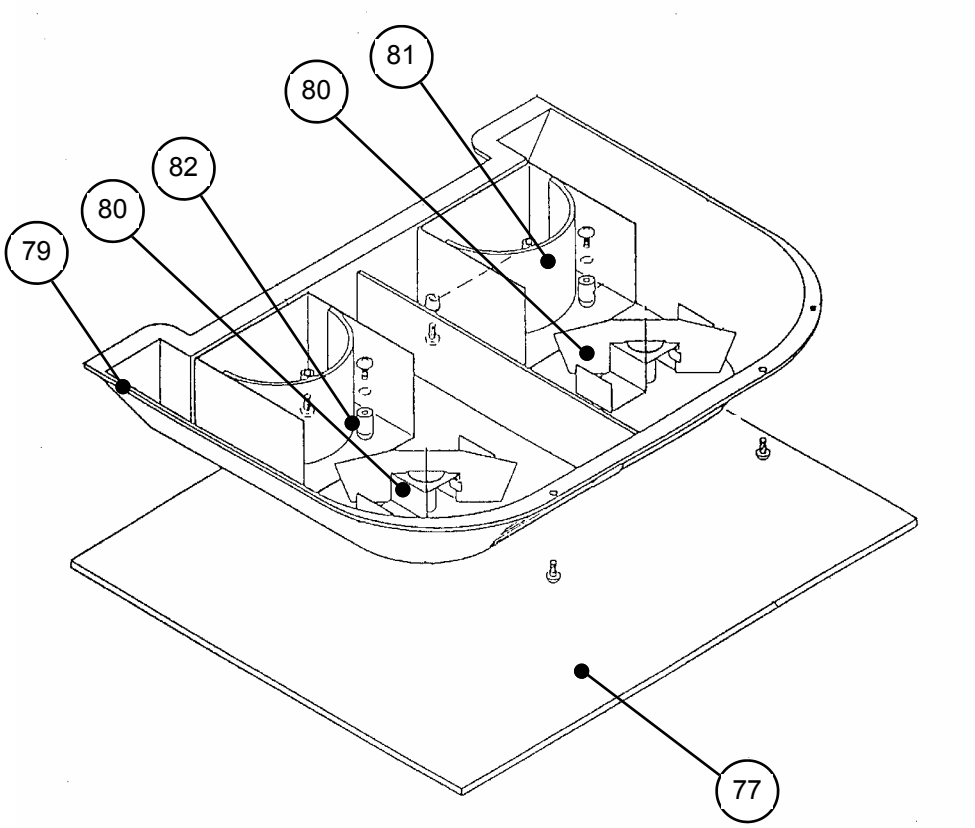
Component layout: TA1725 & TA1925



No	Description	HD1025	HD1425	HD1725	HD1925	HD2025	TA
48	Cavity	10M0026	10M0026	10M0026	10M0026	10M0102	10M0106
49	Relay Board	11M0285	11M0427	11M0427	11M0427	11M0427	11M0430
50	Fan Control Pcb	—	—	—	—	—	11M0261
51	PCB Stand-off	31Z7010	31Z7010	31Z7010	31Z7010	31Z7010	31Z7010
52	Door Spring Kit	11M0353	11M0353	11M0353	11M0353	11M0354	11M0353
53	Transformer	30Z0992	30Z0992	30Z0992	30Z0992	30Z0992	30Z0992
54	Transformer Spacer	20Z0787	20Z0787	20Z0787	20Z0787	20Z0787	20Z0787
55	Safe Edge Cover	40M0614	40M0614	40M0614	40M0614	40M0614	40M0614
56	Capacitor Clip	40H0046	40M0600	40M0600	40M0600	40M0600	40M0889*
57	Capacitor L/H	See Appendix 2					
58	Capacitor R/H						
59	Protective Boot	31Z0167	31Z0167	31Z0167	31Z0167	31Z0167	31Z0167
60	Nomex Cover	—	40M0973	40M0973	40M0973	40M0973	—
61	Magnetron Cooling Fan	30Z0921	30Z0270	30Z0270	30Z0270	30Z0270	30Z0270
62	Thermal Trip (Magnetron)	25Z1016	30Z0257	30Z0257	30Z0257	30Z0257	30Z0257
63	Magnetron	See Appendix 2					
64	Cold Air Duct	40M0884	40M0544	40M0544	40M0544	40M0544	40M0544
65	Diode Assembly	11M0343	11M0343	11M0343	11M0343	11M0343	11M0343
66	Delta Filter	31Z0126	31Z0126	31Z0126	31Z0126	31Z0126	31Z0126
67	Air Outlet Duct	40M0509	40M0509	40M0509	40M0509	40M0509	40M0509
68a	Fuse Holder	30Z0231	30Z0231	30Z0231	30Z0231	30Z0231	30Z0231
68b	Fuse	30Z0168	30Z0168	30Z0168	30Z0168	30Z0168	30Z0168
68c	Fuse Cover	20Z1080	20Z1080	20Z1080	20Z1080	20Z1080	20Z1080
69	Thermal Trip (Oven)	30Z1011	30Z1011	30Z1011	30Z1011	30Z1011	30Z1011
70	Gold Resistor	30Z0283	30Z0283	30Z0283	30Z0283	30Z0283	30Z0283
71	Axial Fan	—	30Z0941	30Z0941	30Z0941	30Z0941	30Z0941
72	Axial Fan Bracket	—	40M0541	40M0541	40M0541	40M0541	40M0541
73	Mains Filter	30Z0997	30Z0997	30Z0997	30Z0997	30Z0997	30Z0997
74	Lampshield	40M0492	40M0492	40M0492	40M0492	40M0492	40M0872

* also requires clip anchor 40M0888

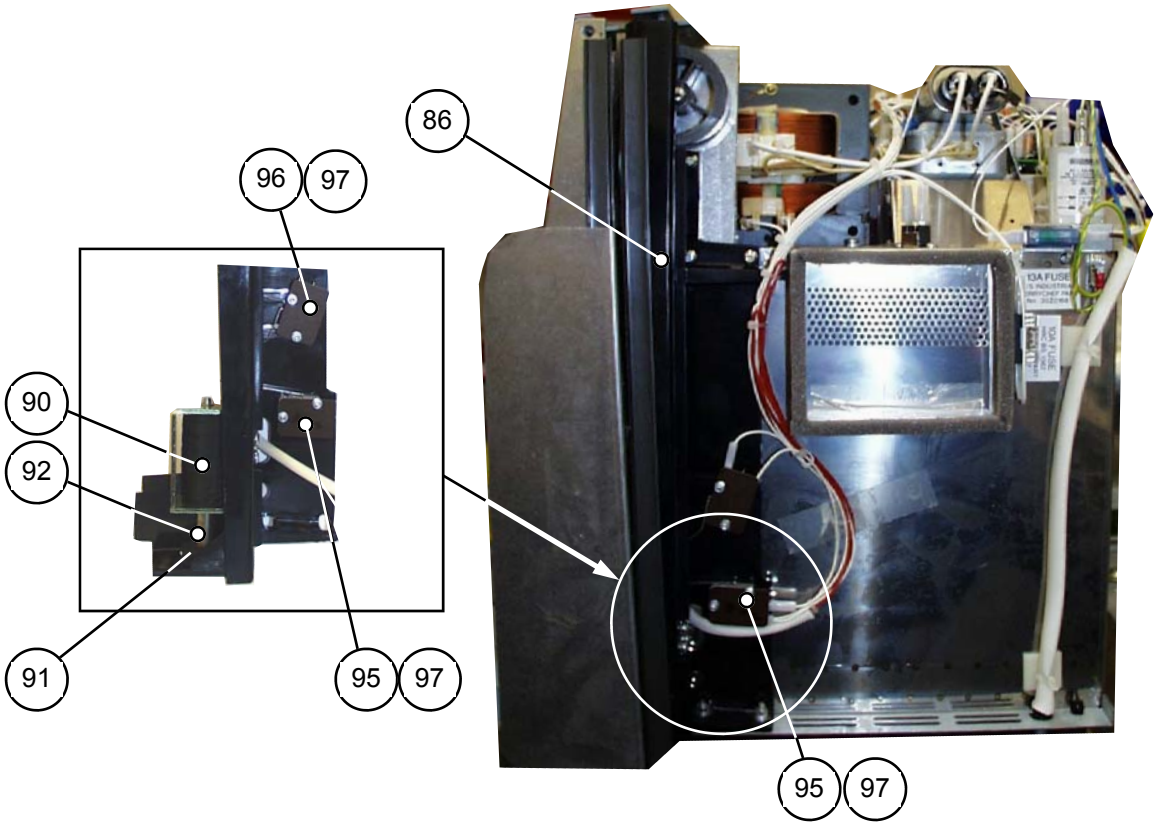
Cavity components



No	Description	HD1025	HD1425	HD1725	HD1925	HD2025	TA
77	Ceramic Base	20Z1355	20Z1355	20Z1355	20Z1355	40M0853	20Z1355
78	White Silastic	31Z0098	31Z0098	31Z0098	31Z0098	31Z0098	31Z0098
79	Roof	40M0563	40M0563	40M0563	40M0563	40M0563	40M0877
80	Stirrer Blade Assembly	11M0140	11M0140	11M0140	11M0140	11M0140	11M0140
81	Box Launch Seal	40M0832	40M0832	40M0832	40M0832	40M0832	40M0832
82	Tuning Stub	40M0508	40M0508	40M0508	40M0508	40M0539	40M0508

Door opening mechanism: Right side

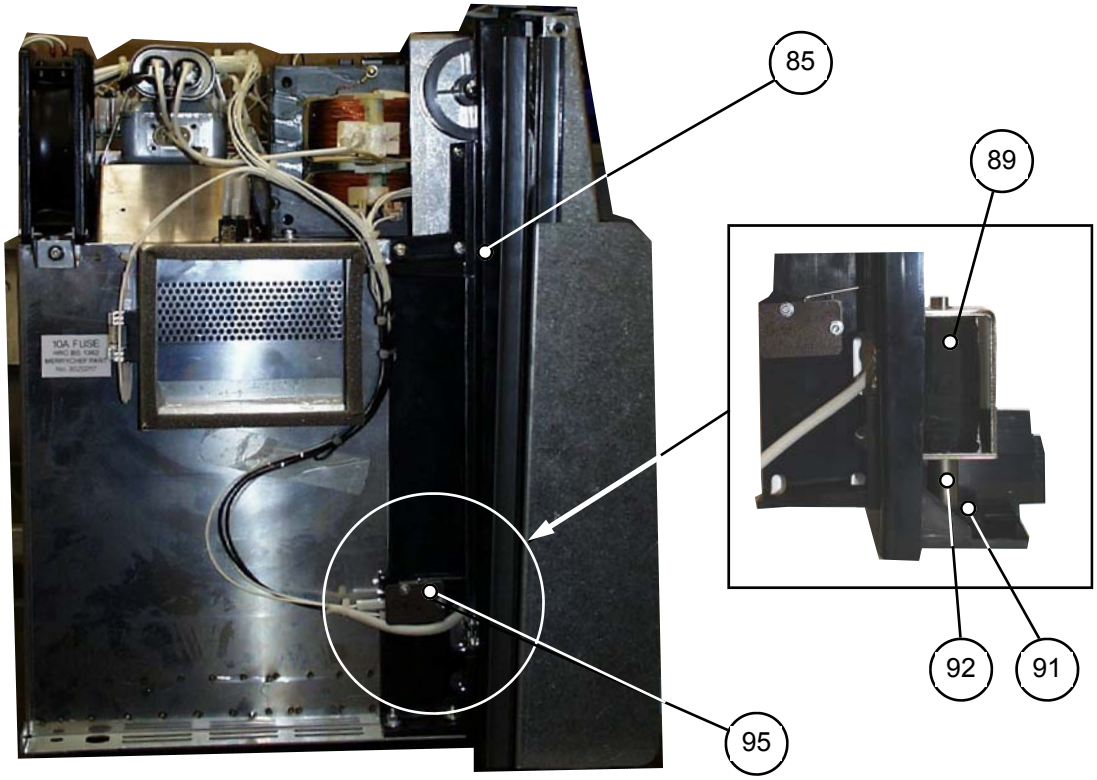
HD1025 & HD1925 KFC models are fitted with Manual Doors
and do not have the Pop-up door solenoid assembly.



No	Description	HD1025	HD1425	HD1725	HD1925	HD2025	TA
85	Door Guide Moulding L/H	20Z0310	20Z0310	20Z0310	20Z0310	20Z0310	20Z0310
86	Door Guide Moulding R/H	20Z0309	20Z0309	20Z0309	20Z0309	20Z0309	20Z0309
87	Solenoid Fixing Screw	31Z3013	31Z3013	31Z3013	31Z3013	31Z3013	31Z3013
88	Solenoid Fixing Washer	31Z5012	31Z5012	31Z5012	31Z5012	31Z5012	31Z5012
89	Door Solenoid (L/H)	30Z0284	30Z0284	30Z0284	30Z0284	30Z0284	30Z0284
90	Door Solenoid (R/H)	30Z0010	30Z0010	30Z0010	30Z0010	30Z0010	30Z0010
91	Solenoid Cork Washer	20Z0710	20Z0710	20Z0710	20Z0710	20Z0710	20Z0710
92	Solenoid Plunger	—	20Z0970	20Z0970	20Z0970	20Z0970	20Z0970
93	Moulded Rubber Stop	—	31Z1002	31Z1002	31Z1002	31Z1002	31Z1002
94	Moulded Rubber Stop Fixing Screw	—	31Z3012	31Z3012	31Z3012	31Z3012	31Z3012
95	Microswitch (Straight Arm)	30Z0240	30Z0240	30Z0240	30Z0240	30Z0240	30Z0240
96	Microswitch (Monitor)	30Z0356	30Z0356	30Z0356	30Z0356	30Z0356	30Z0356
97	Microswitch Insulation Pad	31Z0115	31Z0115	31Z0115	31Z0115	31Z0115	31Z0115
98	Microswitch Fixing Screw	31Z3027	31Z3027	31Z3027	31Z3027	31Z3027	31Z3027
99	Microswitch Fixing Washer	31Z5018	31Z5018	31Z5018	31Z5018	31Z5018	31Z5018
100	Microswitch Fixing Nut	31Z4000	31Z4000	31Z4000	31Z4000	31Z4000	31Z4000

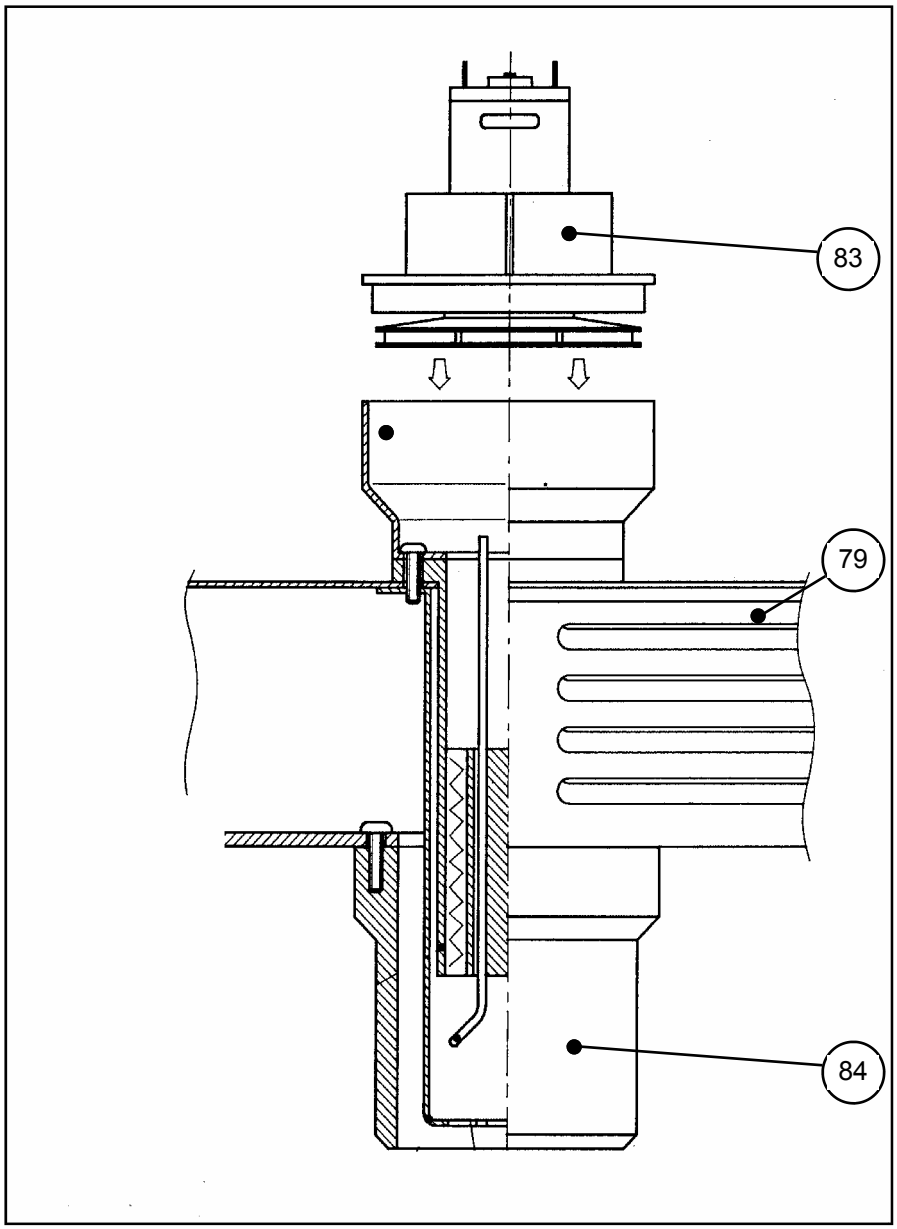
Door opening mechanism: Left side

HD1025 & HD1925 KFC models are fitted with Manual Doors
and do not have the Pop-up door solenoid assembly.



No	Description	HD1025	HD1425	HD1725	HD1925	HD2025	TA
85	Door Guide Moulding L/H	20Z0310	20Z0310	20Z0310	20Z0310	20Z0310	20Z0310
86	Door Guide Moulding R/H	20Z0309	20Z0309	20Z0309	20Z0309	20Z0309	20Z0309
87	Solenoid Fixing Screw	31Z3013	31Z3013	31Z3013	31Z3013	31Z3013	31Z3013
88	Solenoid Fixing Washer	31Z5012	31Z5012	31Z5012	31Z5012	31Z5012	31Z5012
89	Door Solenoid (L/H)	30Z0284	30Z0284	30Z0284	30Z0284	30Z0284	30Z0284
90	Door Solenoid (R/H)	30Z0010	30Z0010	30Z0010	30Z0010	30Z0010	30Z0010
91	Solenoid Cork Washer	20Z0710	20Z0710	20Z0710	20Z0710	20Z0710	20Z0710
92	Solenoid Plunger	—	20Z0970	20Z0970	20Z0970	20Z0970	20Z0970
93	Moulded Rubber Stop	—	31Z1002	31Z1002	31Z1002	31Z1002	31Z1002
94	Moulded Rubber Stop Fixing Screw	—	31Z3012	31Z3012	31Z3012	31Z3012	31Z3012
95	Microswitch (Straight Arm)	30Z0240	30Z0241	30Z0242	30Z0243	30Z0244	30Z0245
96	Microswitch (Monitor)	30Z0356	30Z0356	30Z0356	30Z0356	30Z0356	30Z0356
97	Microswitch Insulation Pad	31Z0115	31Z0115	31Z0115	31Z0115	31Z0115	31Z0115
98	Microswitch Fixing Screw	31Z3027	31Z3027	31Z3027	31Z3027	31Z3027	31Z3027
99	Microswitch Fixing Washer (Flat)	31Z5018	31Z5018	31Z5018	31Z5018	31Z5018	31Z5018
100	Microswitch Fixing Nut	31Z4000	31Z4000	31Z4000	31Z4000	31Z4000	31Z4000

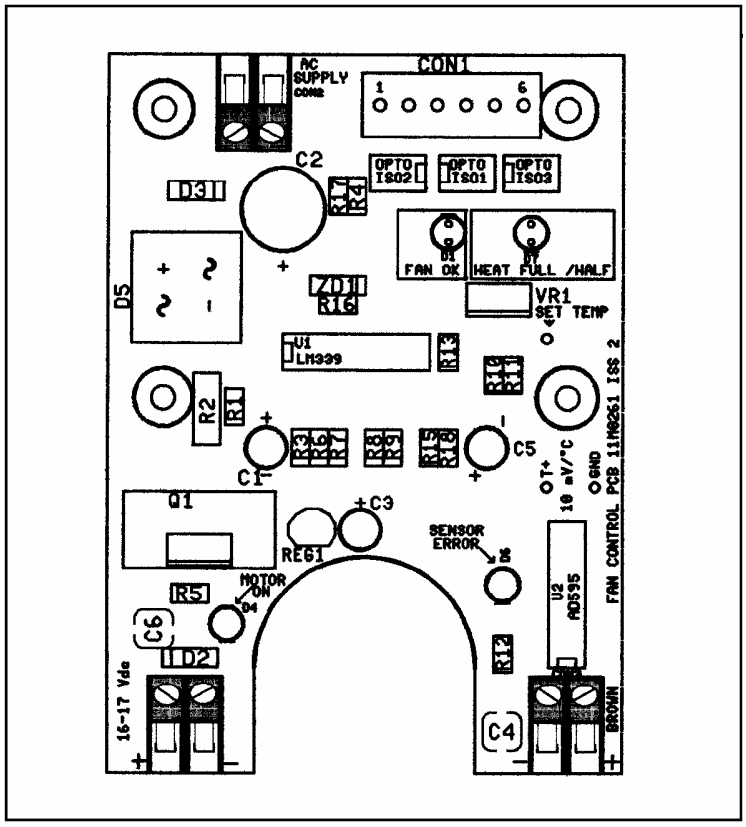
TA 1725 and TA 1925: Turboaire hot air motor assembly



No	Description	HD1025	HD1425	HD1725	HD1925	HD2025	TA
77	Ceramic Base	20Z1355	20Z1355	20Z1355	20Z1355	40M0853	20Z1355
78	White Silastic	31Z0098	31Z0098	31Z0098	31Z0098	31Z0098	31Z0098
79	Roof	40M0563	40M0563	40M0563	40M0563	40M0563	40M0877
80	Stirrer Blade Assembly	11M0140	11M0140	11M0140	11M0140	11M0140	11M0140
82	Tuning Stub	40M0508	40M0508	40M0508	40M0508	40M0539	40M0508
83	Hot Air Motor Assembly	—	—	—	—	—	11M0344
84	Cooling Sleeve	—	—	—	—	—	40M0878

TA 1725 and TA 1925 Fan control PCB – part no. 11M0261

This board provides a full temperature-control system for the Turboaire Hot Air Fan, this will need to be set up in accordance with the following procedure once replaced. It also monitors the Fan Motor performance, and sends a signal to the logic PCB Assembly to indicate that it is functioning correctly. The status of the various functions are indicated by the monitor LEDs.



Thermocouple Sensor Input

When power is connected to the oven, the “Sensor Error” LED (D6) should not illuminate. If this happens, there is a bad connection or a broken wire in the thermocouple sensor. Using a suitably insulated pair of long nose pliers, short the + & - terminals together (D6) should then go out. If this does not happen the PCB is faulty and requires replacing.

Thermocouple Operation

Using a multimeter set to read in excess of 1V dc ,connect the black lead to the pin marked “GND” and the red lead to the pin marked “T+”. A reading in millivolts of ten times the nozzle temperature should be obtained:

If the nozzle is at 22.0 C, then the reading should be 220mV
If the nozzle is at 19.2 C, then the reading should be 192mV

TA 1725 and TA 1925: PCB board operation during oven use

The operation of this PCB is best tested when the oven is in operation. You will need to have a pen and paper to hand in order to set up the Nozzle temperature.
(see Adjusting the nozzle temperature below for further details).

Initial Status of PCB Monitor LEDs

When the oven is turned on, the status of the LEDs on the PCB are as follows:

D1	**Fan OK**	**Off**
D4	**Motor On**	**Off**
D6	**Sensor Error**	**Off**
D7	**Full / Half**	**On**

If any of the LEDs are not as above check all connections to the PCB.

Adjusting the nozzle temperature

Setting the nozzle temperature should be carried out prior to all microwave tests, or should be carried out on an oven which has been turned off for at least one hour. If this is not possible, or if the oven does not function in Turbo mode, proceed to the next section.

1. Place a water load of at least 500ml in a suitable heatproof container into the cavity.
2. Measure the voltage between the Set Temp pin and GND pin with a multimeter set to read at least 10Vdc. Adjust VR1 clockwise until the reading exceeds 7.5V.
3. Program the TA Oven for 3 minutes in Turbo mode on pad 0.
4. Measure the voltage between the T+ pin and GND pin.
   This should indicate the ambient temperature.
5. With the meter still attached, press pad 0. When the oven time display indicates 2:48, note the voltage reading. This should be between 2.0V and 7.5V. Press the Cancel Pad.
6. Measure the voltage between the Set Temp pin and GND pin, and adjust VR1 until the meter reads the same as the reading obtained above.
7. Press Pad 0 again , and verify that the Half / Full LED (D7) switches on and off during the cooking cycle.

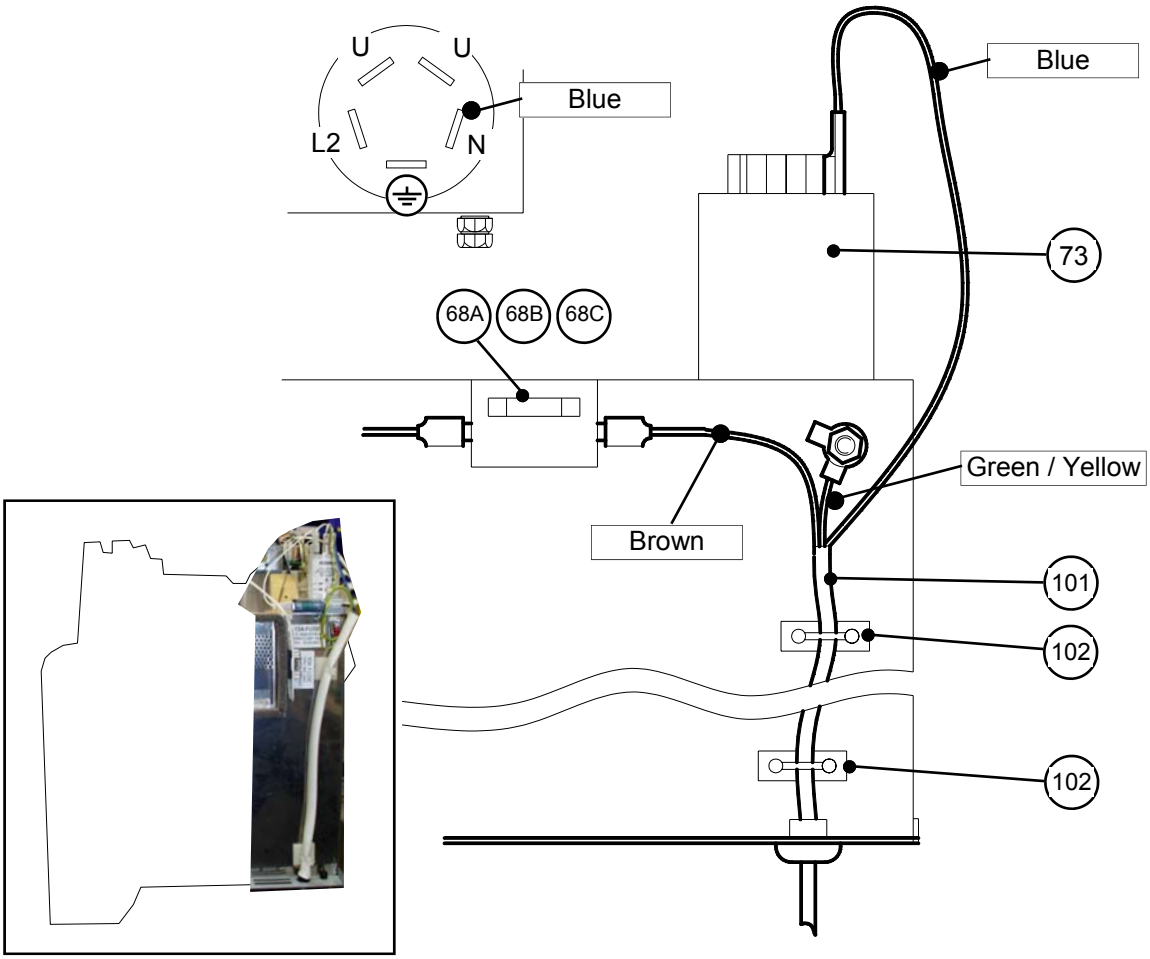
Note : The above setting up procedure **must** be carried out on a cold oven , as the oven will not cook correctly if carried out on a warm oven.
Do not carry out this procedure on a warm oven.

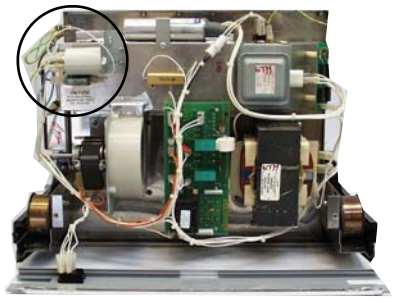
Operation of LEDs during Turbo cooking

On completion of the above procedure, a functional test of the PCB should be made and operation of the LEDs observed.

1. Place a water load of at least 500ml in a suitable heatproof container into the cavity.
2. Program the TA oven for 3 minutes in Turbo mode on pad 9.
3. Press pad 9. The oven should begin to cook and the Motor On LED should light.
4. After about 1-2 seconds, the Fan Ok LED should light .This allows the heater element to work.
5. Within 10 – 20 seconds, the Full / Half LED should go out. This should switch on and off during the cooking cycle.
6. When the time display shows 0:10 the heater element should switch off, which should result in a change of pitch in the noise from the fan. This completes the operational test.

Input wiring details





Model HD1025

Model HD2025

No	Description	HD1025	HD1425	HD1725	HD1925	HD2025	TA
68a	Fuse Holder	30Z0231	30Z0231	30Z0231	30Z0231	30Z0231	30Z0231
68b	Fuse	30Z0168	30Z0168	30Z0168	30Z0168	30Z0168	30Z0168
68c	Fuse Cover	20Z1080	20Z1080	20Z1080	20Z1080	20Z1080	20Z1080
73	Mains Filter	30Z0997	30Z0997	30Z0997	30Z0997	30Z0997	30Z0997
101	Sleeve	89W6010	89W6010	89W6010	89W6010	89W6010	89W6010
102	Clip	31Z7052	31Z7052	31Z7052	31Z7052	31Z7052	31Z7052

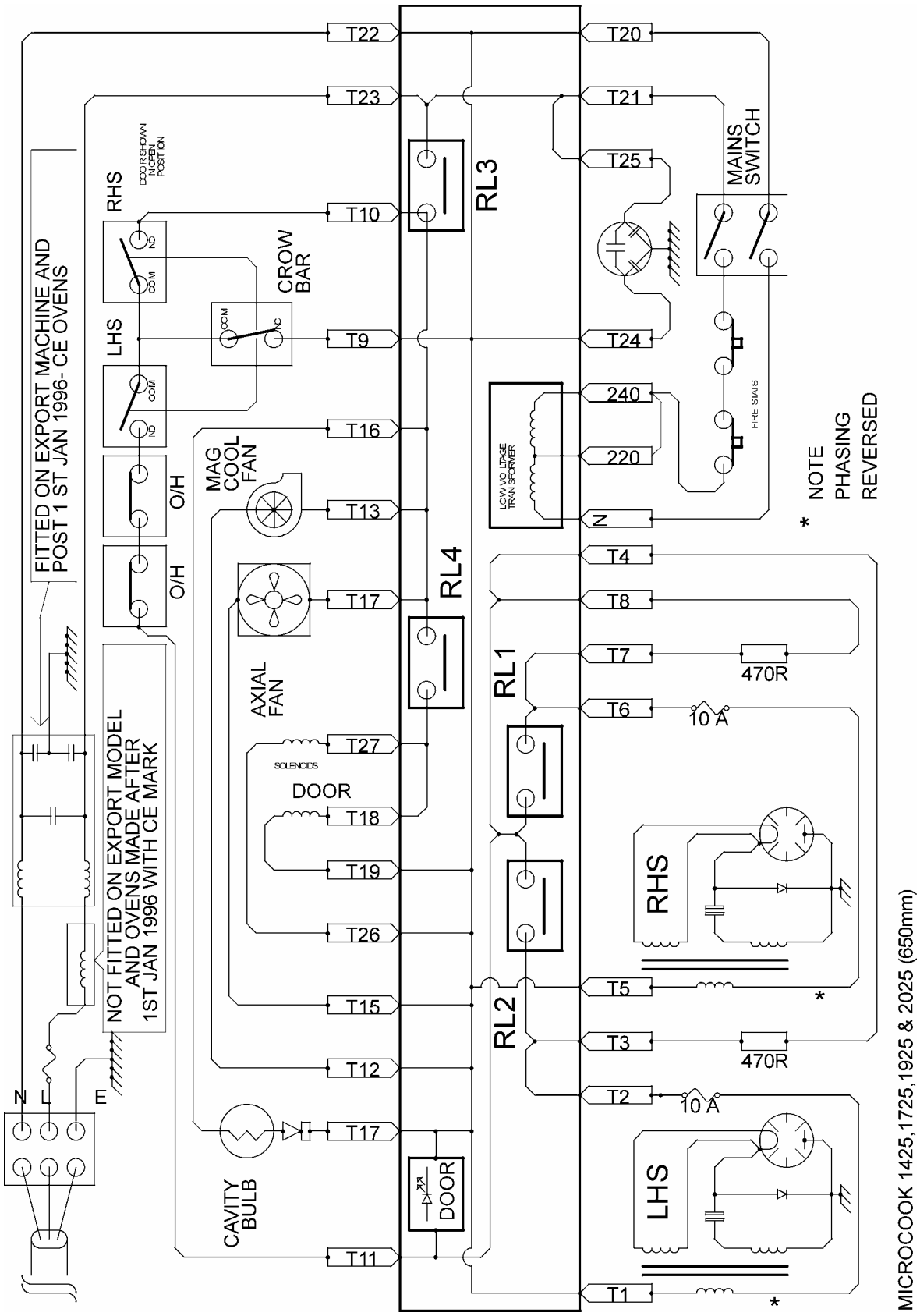
Part number identification chart:

No	Description	HD1025	HD1425	HD1725	HD1925	HD2025	TA
1	Rear Cover	40M0883	11M0269	11M0269	11M0269	11M0270	11M0269
2	Push Fit Feet	—	31Z1187	31Z1187	31Z1187	31Z1187	31Z1187
3	Air filter	—	31Z1104	31Z1104	31Z1104	31Z1104	31Z1104
4a	Screw M5x16	31Z3022	31Z3022	31Z3022	31Z3022	31Z3022	31Z3022
4b	M5 Star Washer	31Z5012	31Z5012	31Z5012	31Z5012	31Z5012	31Z5012
5	Installation Label	31Z2071	31Z2071	31Z2071	31Z2071	31Z2071	31Z2071
6	Self Adhesive Foam Tape	—	31Z0158	31Z0158	31Z0158	31Z0158	31Z0158
7	Service History Label	31Z2056	31Z2056	31Z2056	31Z2056	31Z2056	31Z2056
8	Door Assembly	11M0302	11M0302	11M0302	11M0302	11M0258	11M0302
9	Door Screen	40M0923	40M0923	40M0923	40M0923	40M0858	40M0923
10	Double Sided Tape	30Z0477	30Z0477	30Z0477	30Z0477	—	30Z0477
11	Doorside L/H	40M0919	40M0919	40M0919	40M0919	40M0801	40M0919
12	Doorside R/H	40M0920	40M0920	40M0920	40M0920	40M0802	40M0920
13	Fixing Nut (M5)	31Z4013	31Z4013	31Z4013	31Z4013	31Z4013	31Z4013
14	Fixing Bolt (M5 x 16)	31Z3022	31Z3022	31Z3022	31Z3022		31Z3022
15	Door Main Body	40M0839	40M0839	40M0839	40M0839	40M0855	40M0839
16	Door Mesh	40M0841	40M0841	40M0841	40M0841	40M0860	40M0841
17	Door Choke	40M0840	40M0840	40M0840	40M0840	—	40M0840
18	Choke Filler Horizontal	40M0931	40M0931	40M0931	40M0931	40M0862	40M0931
19	Choke Filler Vertical					40M0747	
20	Inner Door Glass	20Z1075	20Z1075	20Z1075	20Z1075	40M0859	20Z1075
21	Silicone Sealant (White)	31Z0098	31Z0098	31Z0098	31Z0098	31Z0098	31Z0098
22	Door Seal Horizontal	40M0927	40M0927	40M0927	40M0927	40M0861	40M0927
23	Door Seal Vertical	40M0926	40M0926	40M0926	40M0926	20Z0499	40M0926
24	Loctite Gel	32Z5005	32Z5005	32Z5005	32Z5005	32Z5005	32Z5005
25	Door Mesh Spring (Vertical)	—	—	—	—	20Z0338	—
26	Door Mesh Spring (Horizontal)	—	—	—	—	40M0863	—
27	Door Packer	—	—	—	—	20Z0488	—
28	Tessa Tape	31Z0042	31Z0042	31Z0042	31Z0042	31Z0042	31Z0042
29	Top Door Trim	—	—	—	—	40M0856	—
30	Door Handle	—	—	—	—	40M0857	—
31	Handle End Cap L/H	—	—	—	—	40M0523	—
32	Handle End Cap R/H	—	—	—	—	40M0524	—
33	M6 Full Nut	—	—	—	—	31Z4009	—
35	M5 Flat Washer	—	—	—	—	31Z5008	—
36	M5 Shakeproof Washer	—	—	—	—	31Z5012	—
37	M5 x 16 Pan Head Screw	—	—	—	—	31Z3022	—
38	Switch Panel Ass	11M0108	11M0108	11M0108	11M0108	11M0271	11M0299
39	Logic Board	11M0107	11M0107	11M0107	11M0107	11M0107	11M0359
40	Electrostatic Screen	40M0464	40M0464	40M0464	40M0464	40M0464	40M0464
41	Ribbon Connector (10 Way)	11M0117	11M0117	11M0117	11M0117	11M0117	11M0117
42	Filtered Wire Assembly	11M0333	11M0333	11M0333	11M0333	11M0333	11M0333
43	M4 Nylon Face Nut	31Z4014	31Z4014	31Z4014	31Z4014	31Z4014	31Z4014
44	M3 x 12 Hex Head	31Z3117	31Z3117	31Z3117	31Z3117	31Z3117	31Z3117
45	Top Panel	40M0364	40M0364	40M0364	40M0364	40M0851	40M0364
46	Door cap moulding	40M0366	40M0366	40M0366	40M0366	40M0366	40M0366
47	On/Off Switch	30Z0503	30Z0503	30Z0503	30Z0503	30Z0503	30Z0503
48	Cavity	10M0026	10M0026	10M0026	10M0026	10M0102	10M0106
49	Relay Board	11M0285	11M0427	11M0427	11M0427	11M0427	11M0430
50	Fan Control Pcb	—	—	—	—	—	11M0261
51	PCB Stand-off	31Z7010	31Z7010	31Z7010	31Z7010	31Z7010	31Z7010
52	Door Spring Kit	11M0353	11M0353	11M0353	11M0353	11M0354	11M0353
53	Transformer	30Z0992	30Z0992	30Z0992	30Z0992	30Z0992	30Z0992
54	Transformer Spacer	20Z0787	20Z0787	20Z0787	20Z0787	20Z0787	20Z0787
55	Safe Edge Cover	40M0614	40M0614	40M0614	40M0614	40M0614	40M0614
56	Capacitor Clip	40H0046	40M0600	40M0600	40M0600	40M0600	40M0889
	Capacitor Clip Anchor	—	—	—	—	—	40M0888
57	Capacitor L/H	See Appendix 2					
58	Capacitor R/H						

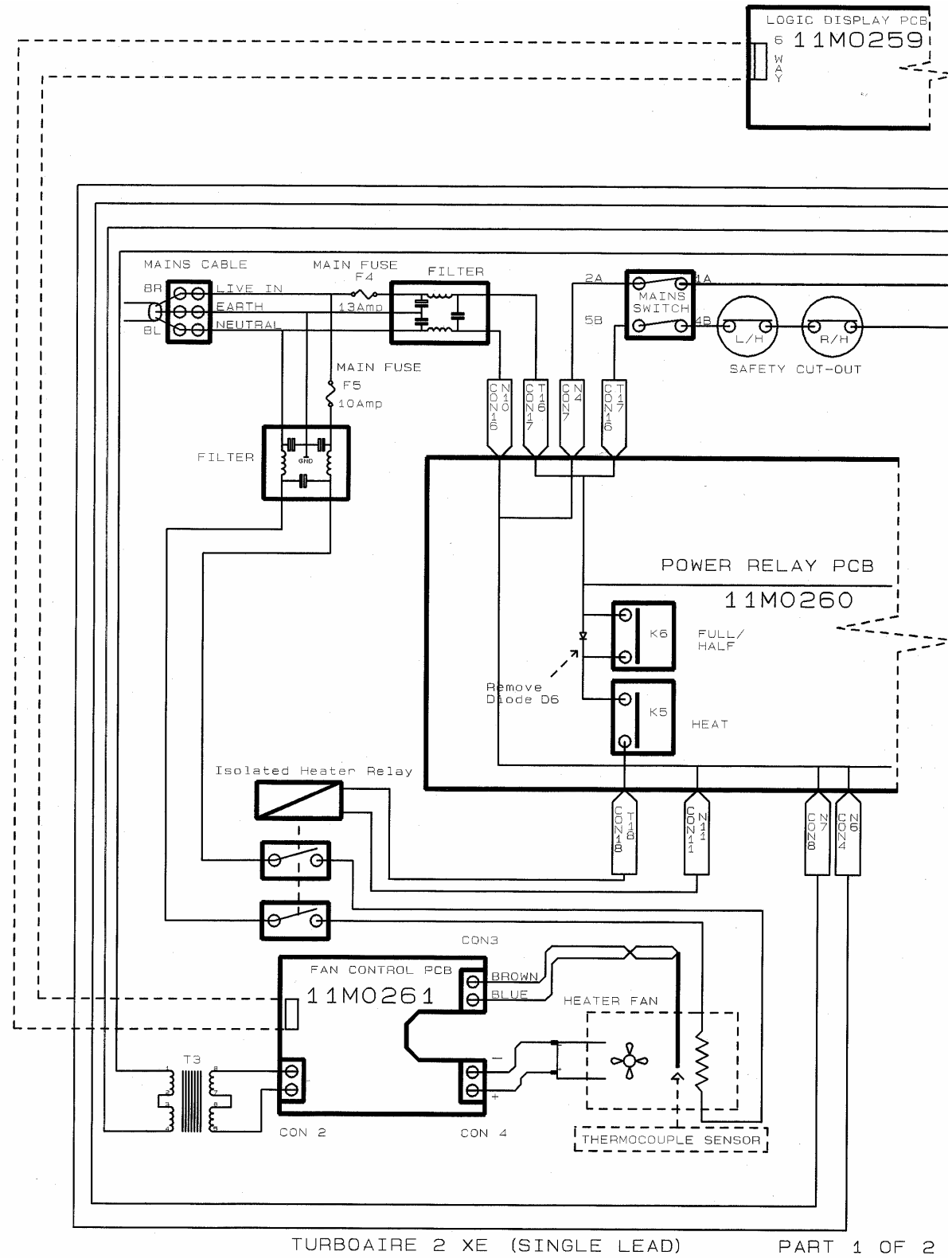
Part number identification chart:

No	Description	HD1025	HD1425	HD1725	HD1925	HD2025	TA
59	Protective Boot	31Z0167	31Z0167	31Z0167	31Z0167	31Z0167	31Z0167
60	Nomex Cover	—	40M0973	40M0973	40M0973	40M0973	—
61	Magnetron Cooling Fan	30Z0921	30Z0270	30Z0270	30Z0270	30Z0270	30Z0270
62	Thermal Trip (Magnetron)	25Z1016	30Z0257	30Z0257	30Z0257	30Z0257	30Z0257
63	Magnetron	30Z0264	30Z0264	30Z0264	30Z0264	30Z0289	30Z0264
64	Cold Air Duct	40M0884	40M0544	40M0544	40M0544	40M0544	40M0544
65	Diode Assembly	11M0343	11M0343	11M0343	11M0343	11M0343	11M0343
66	Delta Filter	31Z0126	31Z0126	31Z0126	31Z0126	31Z0126	31Z0126
67	Air Outlet Duct	40M0509	40M0509	40M0509	40M0509	40M0509	40M0509
68a	Fuse Holder	30Z0231	30Z0231	30Z0231	30Z0231	30Z0231	30Z0231
68b	Fuse	30Z0168	30Z0168	30Z0168	30Z0168	30Z0168	30Z0168
68c	Fuse Cover	20Z1080	20Z1080	20Z1080	20Z1080	20Z1080	20Z1080
69	Thermal Trip (Oven)	30Z1011	30Z1011	30Z1011	30Z1011	30Z1011	30Z1011
70	Gold Resistor	30Z0283	30Z0283	30Z0283	30Z0283	30Z0283	30Z0283
71	Axial Fan	—	30Z0941	30Z0941	30Z0941	30Z0941	30Z0941
72	Axial Fan Bracket	—	40M0541	40M0541	40M0541	40M0541	40M0541
73	Mains Filter	30Z0997	30Z0997	30Z0997	30Z0997	30Z0997	30Z0997
74	Lampshield	40M0492	40M0492	40M0492	40M0492	40M0492	40M0872
75	Lampholder	31Z0280	31Z0280	31Z0280	31Z0280	31Z0280	—
76	Lamp	30Z0382	30Z0382	30Z0382	30Z0382	30Z0382	30Z0901
77	Ceramic Base	20Z1355	20Z1355	20Z1355	20Z1355	40M0853	20Z1355
78	White Silastic	31Z0098	31Z0098	31Z0098	31Z0098	31Z0098	31Z0098
79	Roof	40M0563	40M0563	40M0563	40M0563	40M0563	40M0877
80	Stirrer Blade Assembly	11M0140	11M0140	11M0140	11M0140	11M0140	11M0140
81	Box Launch Seal	40M0832	40M0832	40M0832	40M0832	40M0832	40M0832
82	Tuning Stub	40M0508	40M0508	40M0508	40M0508	40M0539	40M0508
83	Hot Air Motor Assembly	—	—	—	—	—	11M0344
84	Cooling Sleeve	—	—	—	—	—	40M0878
85	Door Guide Moulding L/H	20Z0310	20Z0310	20Z0310	20Z0310	20Z0310	20Z0310
86	Door Guide Moulding R/H	20Z0309	20Z0309	20Z0309	20Z0309	20Z0309	20Z0309
87	Solenoid Fixing Screw	31Z3013	31Z3013	31Z3013	31Z3013	31Z3013	31Z3013
88	Solenoid Fixing Washer	31Z5012	31Z5012	31Z5012	31Z5012	31Z5012	31Z5012
89	Door Solenoid (L/H)	30Z0284	30Z0284	30Z0284	30Z0284	30Z0284	30Z0284
90	Door Solenoid (R/H)	30Z0010	30Z0010	30Z0010	30Z0010	30Z0010	30Z0010
91	Solenoid Cork Washer	20Z0710	20Z0710	20Z0710	20Z0710	20Z0710	20Z0710
92	Solenoid Plunger	—	20Z0970	20Z0970	20Z0970	20Z0970	20Z0970
93	Moulded Rubber Stop	—	31Z1002	31Z1002	31Z1002	31Z1002	31Z1002
94	Moulded Rubber Stop Fixing Screw	—	31Z3012	31Z3012	31Z3012	31Z3012	31Z3012
95	Microswitch (Straight Arm)	30Z0240	30Z0240	30Z0240	30Z0240	30Z0240	30Z0240
96	Microswitch (Monitor)	30Z0356	30Z0356	30Z0356	30Z0356	30Z0356	30Z0356
97	Microswitch Insulation Pad	31Z0115	31Z0115	31Z0115	31Z0115	31Z0115	31Z0115
98	Microswitch Fixing Screw	31Z3027	31Z3027	31Z3027	31Z3027	31Z3027	31Z3027
99	Microswitch Fixing Washer	31Z5018	31Z5018	31Z5018	31Z5018	31Z5018	31Z5018
100	Microswitch Fixing Nut	31Z4000	31Z4000	31Z4000	31Z4000	31Z4000	31Z4000
101	Sleeve	89W6010	89W6010	89W6010	89W6010	89W6010	89W6010
102	Clip	31Z7052	31Z7052	31Z7052	31Z7052	31Z7052	31Z7052

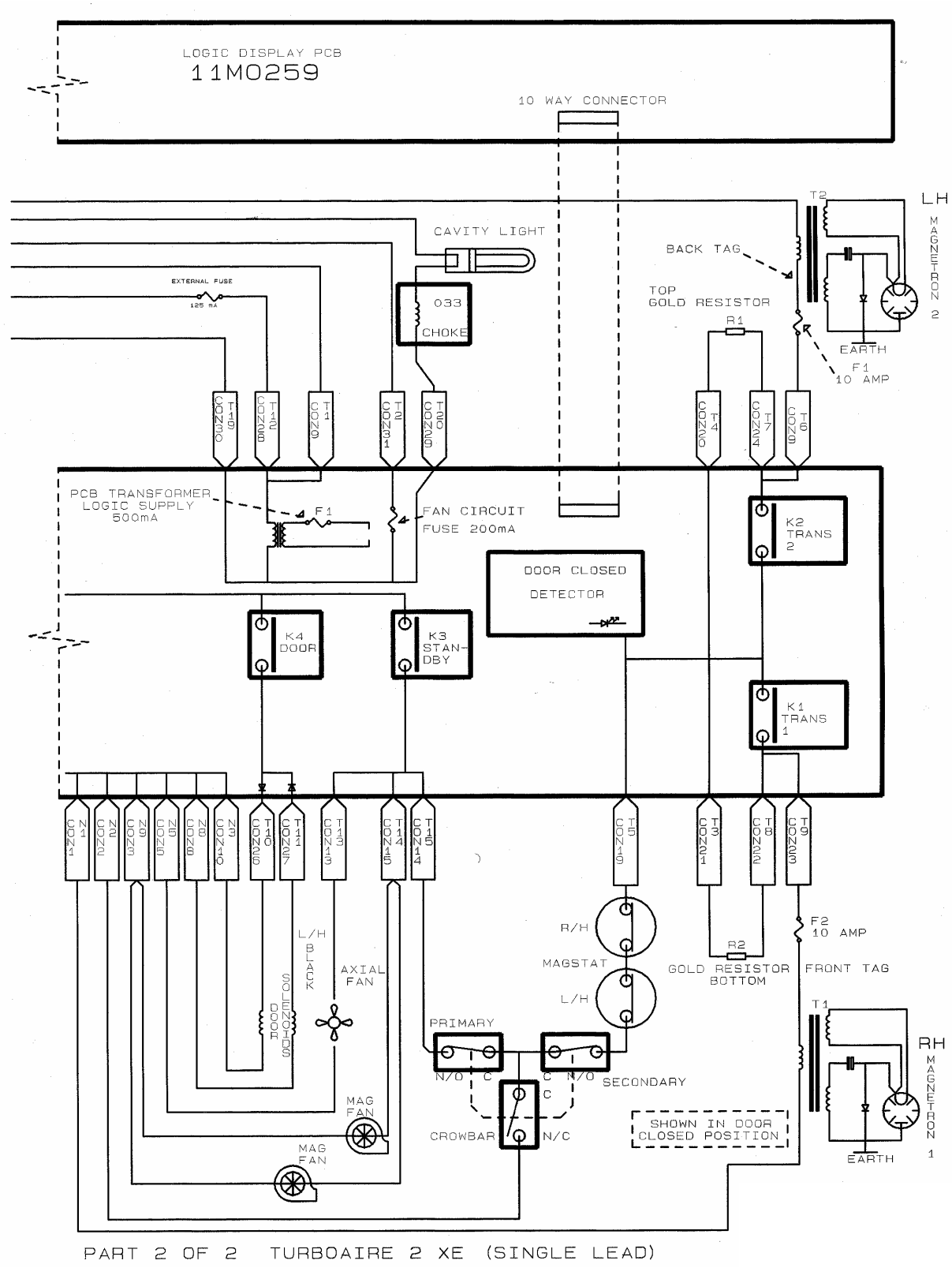
Circuit diagram: Microcook HD 1025, HD1425, HD1725, HD1925, HD2025



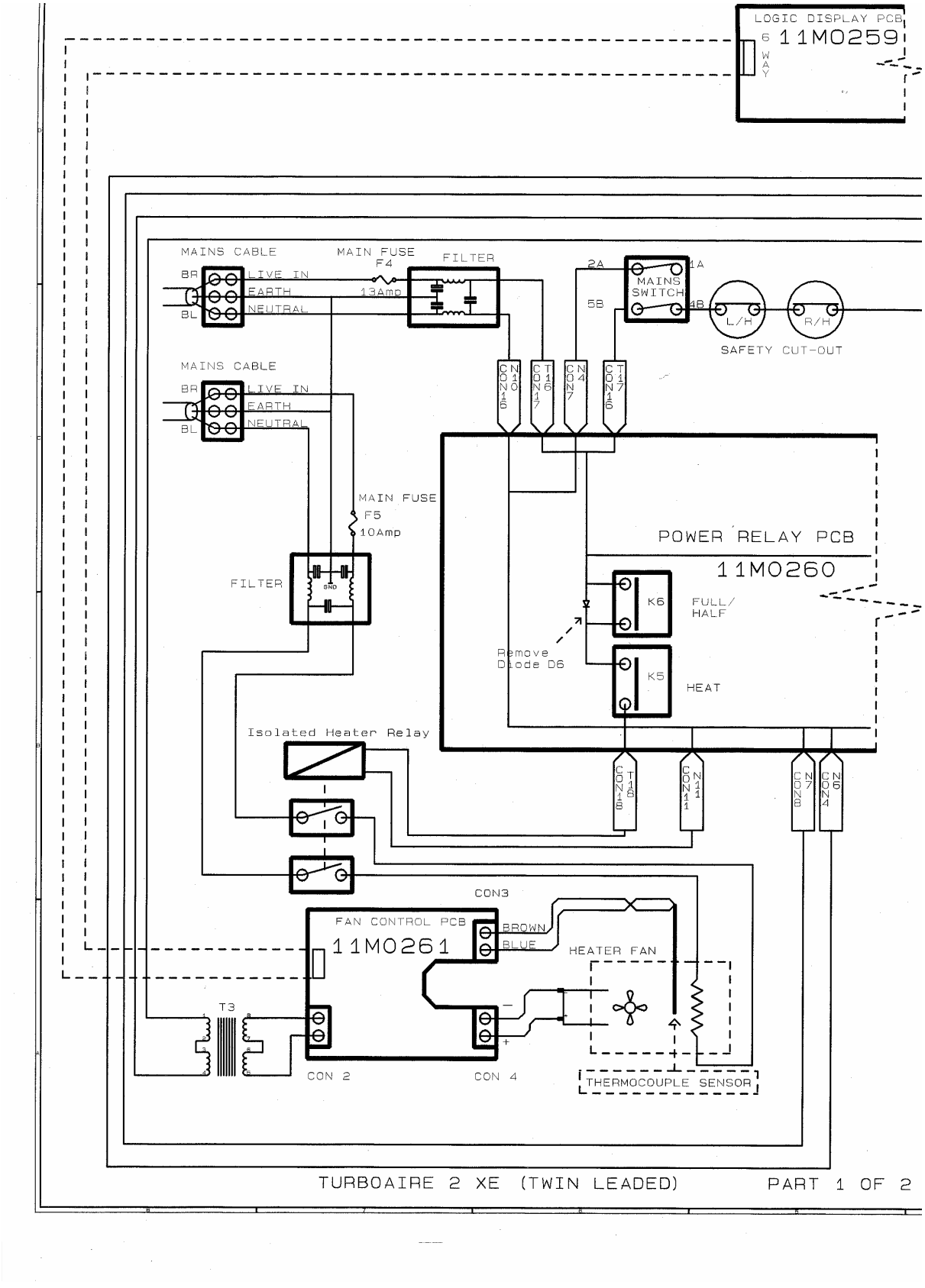
Circuit diagram: Turboaire II XE (Single leaded) Part 1



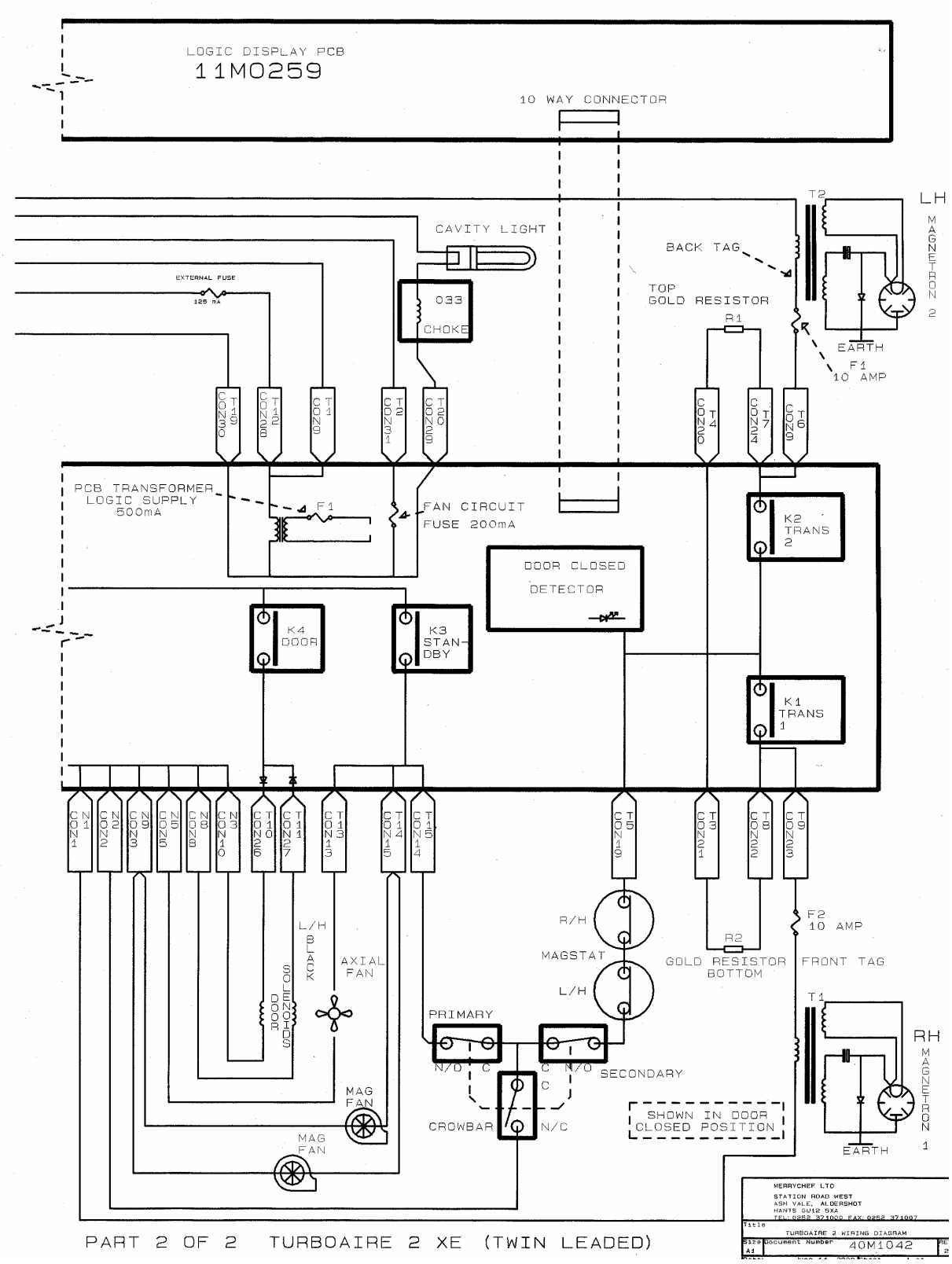
Circuit Diagram: Turboaire II XE (Single leaded) Part 2



Circuit Diagram: Turboaire II XE (Twin leaded) Part 1



Circuit Diagram: Turboaire II XE (Twin leaded) Part 2

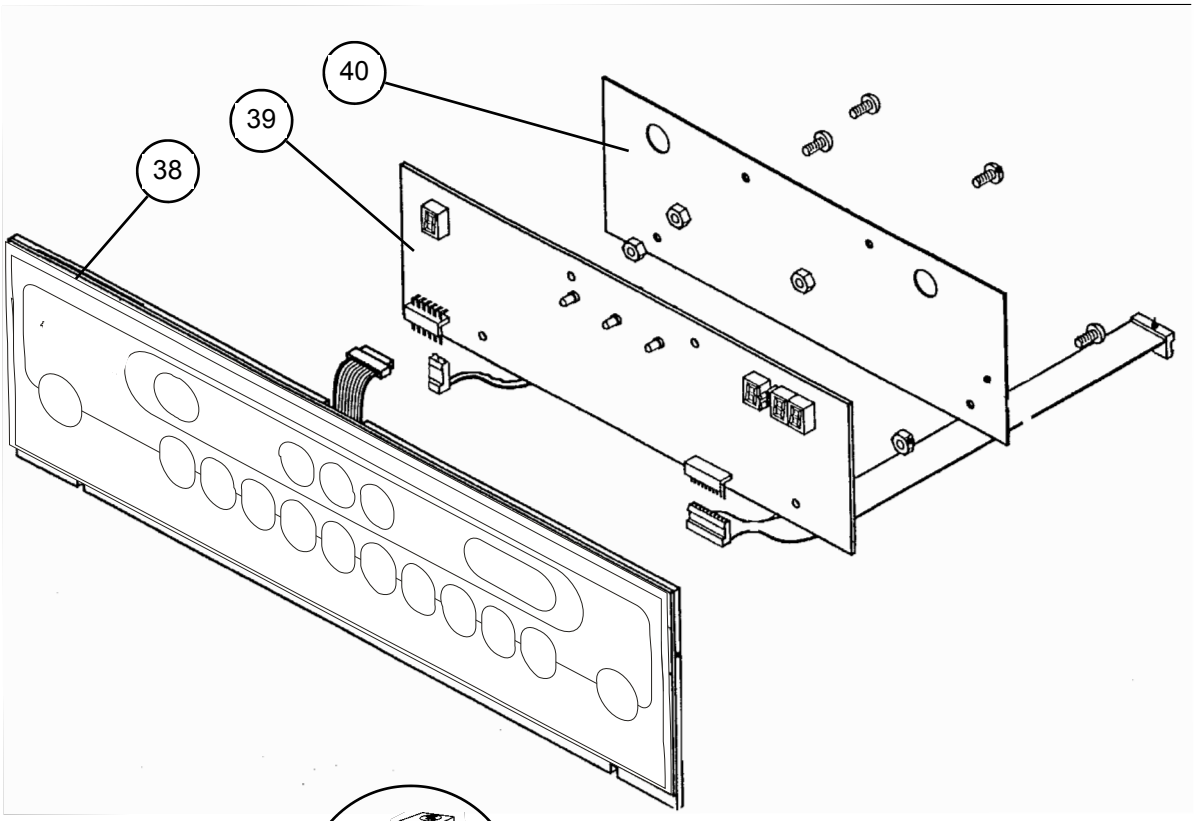


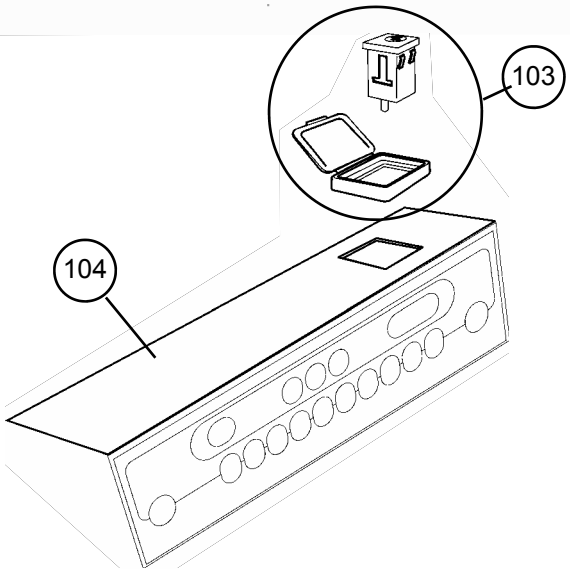
APPENDIX 1: KFC models

As Microcook HD1925 except the following parts:

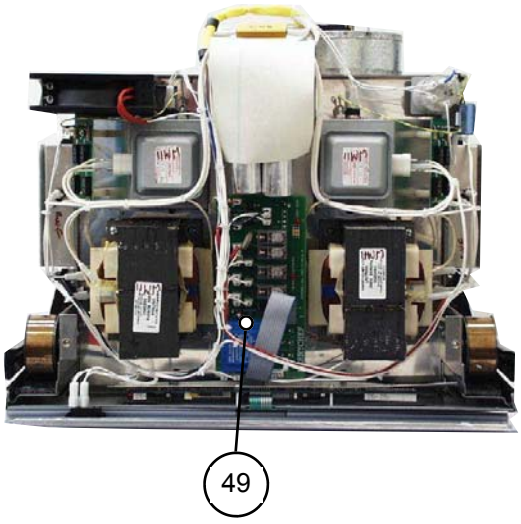
No	Description	KFC
8	Door Assembly	11M0393
	Door Pocket (For Menu Card)	40M1060
38	Switch Panel Assy	11M0394
39	Logic Board	11M0416
49	Relay Board (2 Buzzers)	11M0285
103	Menukey Assembly	10C0148
104	Top Panel Extrusion	40M1062
105	MenuKey connection lead	11H0064
106	Diode PCB	11M0364

See Appendix 6 for Logic Board connections and jumper details





Top View



APPENDIX 2: Capacitors and Magnetrons

Microcook HD & TA Models:

PANASONIC MAGNETRON 30Z1171		
Oven Model	Capacitor LH	Capacitor RH
HD 1025	1.1µF 30Z1242 (1 only)	
HD 1425	0.88µF 30Z1330	0.75µF 30Z1329
HD 1725	2x 1.0µF 30Z1331	
HD 1925	2x 1.1µF 30Z1242	
HD 2025	2x 1.1µF 30Z1242	
TA 1725	2x 1.0µF 30Z1331	
TA 1925	2x 1.1µF 30Z1242	

SANYO MAGNETRON		
Oven Model	Capacitor LH	Capacitor RH
HD 1025	1.25µF 30Z1078 (1 only)	
HD 1425	0.88µF 30Z1330	1.0µF 30Z1331
HD 1725	2x 1.1µF 30Z1242	
HD 1925	2x 1.25µF 30Z1078	
HD 2025	2x 1.25µF 30Z1078	
TA 1725	2x 1.1µF 30Z1242	
TA 1925	2x 1.25µF 30Z1078	

APPENDIX 3: Cleaning procedure

For the oven to operate at peak efficiency, the cavity, door and the air filters must be kept clean.

A daily cleaning routine will ensure that you comply with the required hygiene standards and will help to maintain and prolong the efficiency of your oven.
Follow the SAFETY INSTRUCTIONS at the beginning of this manual.

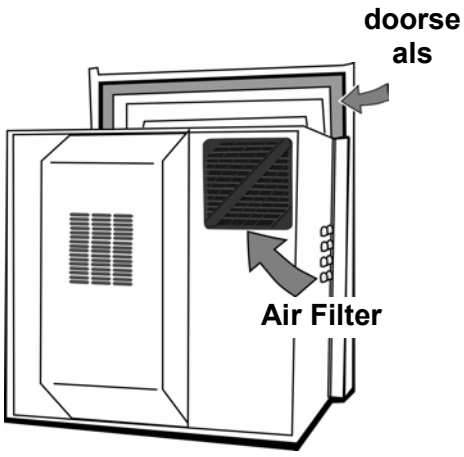
- **ALWAYS switch off at the electrical supply.**
- **As required, wipe out spillage's with disposable paper wipes**
- **NEVER use steel wool, knives or harsh abrasives on any part of the oven**

As with all electrical appliances, it is wise to have the electrical connections inspected periodically.

Faults arising from neglect or misuse including use without clean filters in place are not covered by the guarantee. Service visits as a result of such faults will be chargeable.

Cleaning the Air Filter

1 Ease the air filter cover from the top of the rear panel.
2 Wash in clean, warm soapy water, rinse and pat dry. Put back into position.
DO NOT USE THE OVEN WITHOUT A CLEAN AIR FILTER IN POSITION



DO NOT USE THE OVEN WITHOUT A CLEAN AIR FILTER IN POSITION

Cleaning the door

1 Lift the door up and out of the channels.
2. Wipe the door and seals with a damp cloth.
NEVER IMMERSE DOOR IN WATER.
3 Examine the door and seals for signs of wear and damage. Refer to SAFETY INSTRUCTIONS
4 Using both hands slot the door back into its channels and slide firmly down.

Cleaning the oven cavity

1 Wipe down the sides and the floor of the cavity with a clean damp cloth.
2 Gently wipe the ceiling. **Take care not to press upwards as this could damage the concealed stirrer fans.**

Cleaning the control panel and exterior surfaces

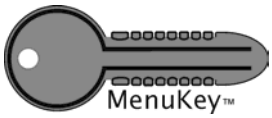
Wipe down regularly with a damp cloth.

Hints and Tips for stubborn stains in the oven cavity

1 Place a container of water (1.5 litres) into the centre of the oven cavity.
2 Set timer to 9 minutes.
3 Set microwave power to 100%.
4 At end of steam cycle wipe out cavity with a clean cloth.

APPENDIX 4: MenuKey download procedure

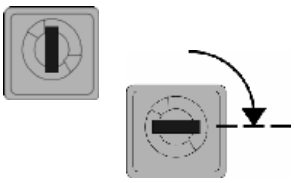
The MenuKey™ System automatically changes all the cooking programs on the numbered icon pads with the turn of a key.

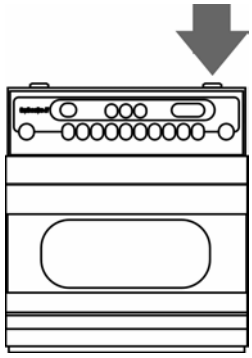


To change the menus on the oven:

1 Ensure the power switch is **off**.

2 Lift the MenuKey cover in the front panel of the oven and put the key in the keyhole
Turn the key clockwise to the stop (¼ turn).
Do not remove the key at this stage.





3 Switch the power switch **on**.
The oven will now go through the program download sequence by displaying the following:

The Key Code example: Key C02

The number of programs and each program number on the key.

example: 27 Programs

When the display shows 00:00 remove the key and close the cover. The oven is now ready to use with the new programs.

EPS - FAIL - REDO
External Program System ERROR.
If the key is removed before the download is complete or the process is interrupted the display shows “EPS” then “FAIL” then “REDO”. Switch the oven off and begin the MenuKey download again.

To confirm the download is successful
Switch off the oven.
Switch on and the display briefly will show the following:

1. The new key code
2. 00:00 (oven ready to use)

If the download is not successful the key number will not be displayed and if the program pads are pressed an E3 error will display.

APPENDIX 5: Fitting 30Z1177 20A Anti surge fuse

PROCEDURE FOR REPLACING 13A ANTI-SURGE FUSES WITH 30Z1177 FLM020 Type

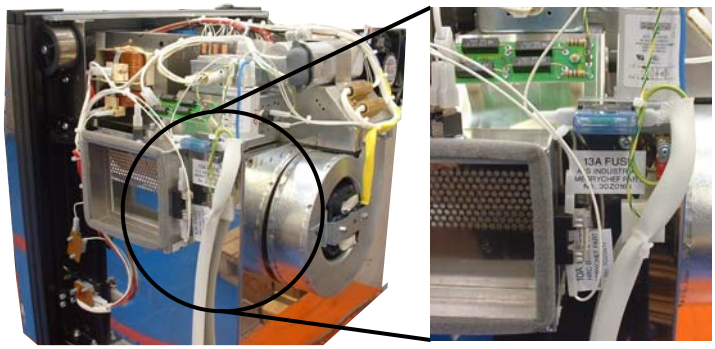
Brief description: The change in fuse is due to the manufacturer ceasing to make the 13A anti-surge fuses Pt. No. 30Z0168 which are unique to our requirements. To overcome this we need to use the FLM020 fuses Pt. No. 30Z1177 for the Microwave circuit on all Microcook HD1725 & HD1925 ovens. The operation listed below is to be followed to any service calls where the 13A A/S fuses have blown.

Parts required:

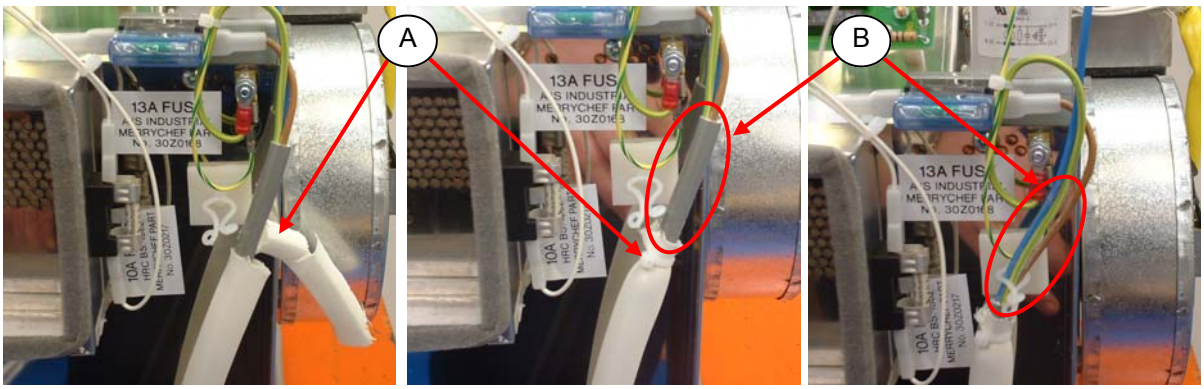
1.	Pt. No. 30Z1177	20A littlefuse FLM020	x1
2.	Pt. No. 30Z1178	30A fuse holder (FLM Series)	x1
3.	Pt. No. 31Z2092	Label - 20A FLM fuse	x1
4.	Pt. No. 31Z2030	Label - 10A fuse	x1
5.	Pt. No. 31Z3061	No.6x3/8" self tap pan	x1

PROCEDURE FOR REPLACING 13A ANTI-SURGE FUSES WITH FLM020 IS AS FOLLOWS:

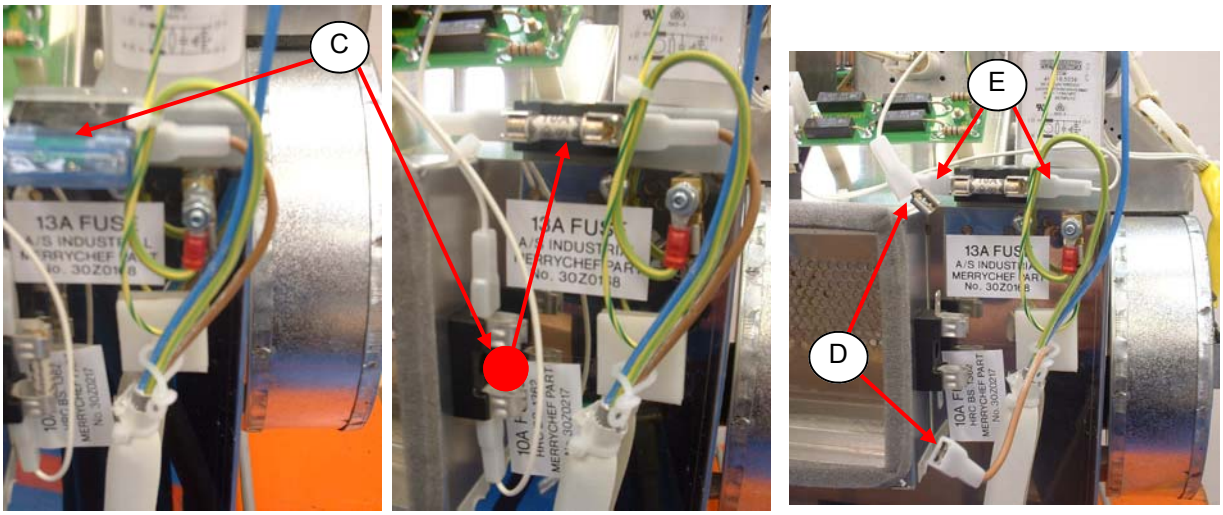
1. Isolate oven from mains power supply.
2. Remove rear cover to obtain access to the side of the oven.



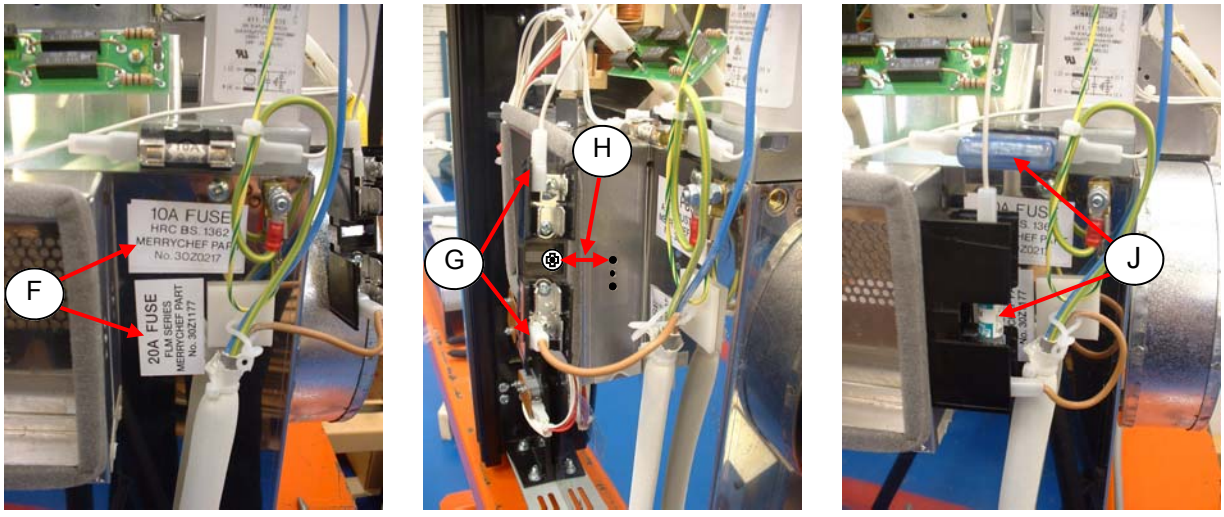
3. Strip back the GSS sleeving over the mains cable approx. 50mm and cable tie back into location. (A)
4. Strip back the jacket of the mains cable, again approx. 50mm. (B)



5. Remove the blue fuse cover and the 13A fuse, then remove the 10A fuse and place in the 13A fuse location. (C)
6. Remove the (BROWN) mains wire and the filter wire L2 from the 13A fuse holder. (D)
7. Move the wires from the 10A fuse holder and fit them to the 13A fuse holder. (E)



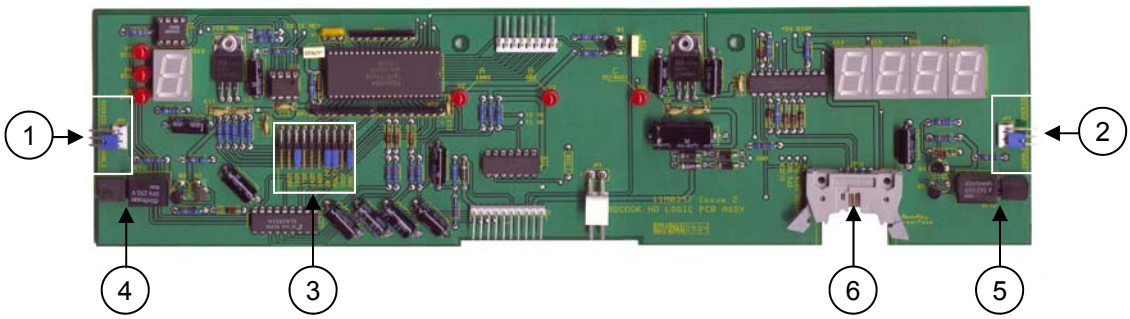
8. Fit new (10AMP LABEL) Pt. No. 31Z2030 over the old 13AMP label. Remove the old 10AMP label and fit the new (20AMP LABEL) Pt. No. 31Z2092 into position so it will be visible when new fuse holder is fitted. (F)
9. Connect the (BROWN) mains wire to the bottom location on the new fuse holder Pt. No. 30Z1178, connect the filter wire L2 to the top location of the fuse holder. (G)
10. Fit the fuse holder into position using Pt. No. 31Z3061 x1 in the upper most hole location, ensure screw is bias towards the right hand side of the slot. (H)
11. Re-fit the blue cover to the 10AMP fuse holder. And fit the 20AMP fuse Pt. No. 30Z1177 in to the new fuse holder. (J)
12. Power up the oven and check machine functions correctly. **(Care should be taken when powering up ovens with covers removed).**
13. Turn off the power and isolate the oven from the mains power supply, then fit the cover.
14. Please ensure that you record TB067 completed on your (SVR).



APPENDIX 6 : Logic Board & Magnetron Failure Detect

11M0416 KFC optic Logic PCB with Magnetron Failure Detect

in the event of failure the system will automatically compensate and double the remaining cook times thus ensuring that the program achieves its target temperature in the food product. At the end of the cooking cycle the system will display either “E4” = left hand magnetron failure or “E5”= right hand Magnetron failure. In the event that both Magnetrons fail the system will report an “EA” error. Once a failure is detected, It takes 4 seconds before the control circuit reacts thus preventing false triggering



Ref.	Description
1	Left hand side magnetron monitor enabled / override jumper
2	Right hand side magnetron monitor enabled / override jumper
3	Microwave power and operation jumper
4	Magnetron monitor receive left (fibre optic receive)
5	Magnetron monitor receive right (fibre optic receive)
6	Locking MenuKey cable connector

Jumper	Description	
1	If the magnetron failure detection is being used: The jumper should be positioned between the enable pin and centre pin. If not then the jumper should be positioned between override pin and centre pin. Please note that if the magnetron failure detection is not being used then fibre optic cables and diode board 11M0363 are not required. This is clearly indicated on the PCB itself.	
2	As Jumper 1	
3	01 - NC	N/A
	02 - 2025	Jumper ON = 2025
	03 - 1925	Jumper ON = 1925
	04 - 1725	Jumper ON = 1725
	05 - 1425	Jumper ON = 1425
	06 - 1025	Jumper ON = 1025
	07 - 30 prog	Jumper always ON
	08 - Multi	Jumper always ON
	09 - Cook	Jumper always OFF
	10 - Man	Jumper OFF = Automatic door Jumper ON = Manual door

Manual corrections and modifications

Whilst every effort has been made to ensure that the information contained in this manual is accurate and complete, if you believe that an error has been made, or if you have any suggestions for how the manual could be improved, please fill in and return this form. A review of any forms returned will be made on a regular basis, and the manual will be updated if required.

Name	
Address	
Page on which error occurs (if applicable) - **Microcook HD & TA**	
Description of error	
Suggestion for improvement to manual	
Please return this form to:	Service Dept. Merrychef Limited, Station Road West, Ash Vale, Aldershot Hampshire GU12 5XA United Kingdom Tel: +44 (0)1252 371000 Fax: +44 (0)1252 371007 Internet address: http://www.merrychef.com E-mail: technical.support@merrychef.com